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ABSTRACT

The manual provides the information required to administer the training program. The first three sections describe: (1) the requirements for and objectives of the tumor registrar training program; (2) the format (incorporating programed instruction and self-scoring practical exercises), student evaluation techniques, and contents of the self-contained, 10-part correspondence course; and (3) the preparation and field test of the initial version of the training program. Information on general administrative procedures and distribution of Instructional Packages (IPs) is contained in section 4. Section 5 lists other training and exercise materials, indicating how they should be distributed with the instructional packages. Criterion test scoring procedures for the examinations in each IP, as well as a key and guidance for use in scoring the practical exercises that require students to abstract sample medical charts, are provided in section 6. In section 7, there is a scoring key for each of the 10 criterion tests in the program. The final section presents the rationale for the design and utilization of tumor registry abstract forms and includes lists of items of information for cancer registries. Appended are the table of contents for IPs one through ten and for the Tumor Registrar Handbook, and a copy of the Tumor Registry Abstract Form (Detailed Version).

(Author/MS)

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Revised Edition

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Prepared under the direction of

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Prepared for:

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The Charity Hospital (New Orleans) Tumor Registry
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HumRRO Division No. 1 (System Operations)
Alexandria, Virginia

HUMAN RESOURCES RESEARCH ORGANIZATION

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

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INTRODUCTION

This manual should provide all the information required to administer the training program entitled "Instructional Program in Medical Vocabulary and Medical Chart Abstracting for Tumor Registrars." It does not contain all the information required to score the examinations (criterion tests) that go with the program. Scoring keys and the correct answers are provided for each test question. However, to properly judge the correctness of the answers to certain questions, one should be knowledgeable regarding the contents of the training program. It is recommended, therefore, that whoever administers this program first study carefully each Instructional Package of the program.

The first three sections of this manual describe in general terms the objectives of the program, its major characteristics, and how the program was prepared and evaluated. Section III should be of special interest because it presents test score and time-to-study data for the students of the first version of the program.

Sections IV and V are concerned with administrative procedures. This course is easy to administer; it would be well, however, to establish some simple forms for recording student progress, student grades, and student questions. Whenever possible, student questions should be answered promptly either by mail or by telephone.

Presumably you will be provided with a complete set of program materials for each student you have to monitor. However, you probably will not have enough copies of the detailed abstract form. The numbers of these forms or portions thereof required per student are listed in Section V. As needed, you should have additional copies printed.

The procedures for scoring the Criterion Tests for the program are described in Sections VI and VII. These procedures might seem quite complicated. However, an attempt has been made to spell out, as precisely as possible, the procedures for grading questions that require the student to abstract portions of a medical chart. Once you understand the scoring procedures, it will be possible for you to make up additional test questions using the medical charts of your own hospital.

The detailed abstract form used in this course is much more detailed than the abstract form used by most registries. The rationale for this form is discussed in Section VIII (it is also discussed in Instructional Package 1). Each registry or registry system needs to decide what items of information should be recorded on their abstract form. Then, a new form should be prepared, especially tailored to the needs of the particular registry. The core items of information that should be recorded on a tumor registry abstract are listed in Section VIII.

Section 1

REQUIREMENTS FOR AND OBJECTIVES OF THE TUMCR REGISTRAR TRAINING PROGRAM

TRAINING REQUIREMENTS FOR A TUMOR REGISTRAR

A considerable portion of the existing information on incidence of cancer and on the effects of various types of treatment for cancer is based on data obtained from tumor registries. Most tumor registries are located at individual hospitals. About 900 registries currently exist in the United States. The major activities conducted at these registries include abstracting the medical chart of a cancer patient, determining the post treatment status of former patients, providing assistance to help ensure the periodic checkup of former patients, and preparing statistical reports based on tumor registry data.

Most registries exist for the purpose of providing information to the physicians who practice at a particular hospital. Within some states, counties, and geographical regions, individual registries have been organized into registry systems. These systems have been supported, at least in part, by the Regional Medical Program Services (RMPS), a division of the Health Services and Mental Health Administration. A small number of individual registries and state registry systems are supported in part by the End Results Section (ERS) of the National Cancer Institute (NCI). These registries and registry systems provide data to the NCI for epidemiological research purposes.

A tumor registry is operated by a tumor registrar. At large registries the registrar is assisted by one or more abstractors, coding clerks, and patient follow-through clerks. The tumor registrar may have received training as a medical records librarian or as a medical secretary, or may have an AA or BA degree in one of the biological sciences. It is quite common, however, for a registrar to have received no formal biological or medical training; assistants are even less likely to have had such training.

Tumor registrars and their assistants have customarily been trained by traditional lecture and workshop techniques and by on-the-job training. Instruction generally was provided by medical doctors who seldom had much time to devote to training registry personnel.

The only formal training program in existence as of January 1972 is that operated by the Tumor Registry, Cancer Research Institute, University of California, San Francisco. The training program is primarily suited to persons who already have some experience at operating a tumor registry. Trainees are required to live at the training site from one to four weeks. The enrollment capacity for the program is limited; in addition, few hospitals are able, or willing, to provide the funds to support their tumor registry personnel while away on a training assignment.

The training program described in this report was developed in part because of the desire of the Louisiana Regional Medical Program to promote the establishment of a statewide registry system within the State of Louisiana. A major impediment to the establishment of such a system was the lack of a suitable training program for tumor registrars. A survey of hospital personnel and conditions within the state indicated that procedures would have to be developed for training persons employed at small hospitals located throughout the state, much of this training would have no close monitoring, and

the training would have to take place at the trainees' work site or in their home setting. These were the major reasons for supporting the development of a self-instructional training program, similar to a correspondence course, for tumor registrars.

OBJECTIVES OF THE TUMOR REGISTRAR TRAINING PROGRAM

The original goal of the training program was to teach the medical vocabulary required of tumor registrars. Early in the development of the program, it was decided to expand the intent to include and to emphasize the teaching of the End Results Group (ERG) abstracting/coding procedures. These procedures are employed at registries supported in part by the End Results Section, National Cancer Institute.

A training program must distinguish between activities which the trainee will be taught to perform at a journeyman level of proficiency and activities with which the trainee will be *familiarized*. This latter set of activities includes those which the trainee is told about, and may even acquire considerable knowledge about, but still cannot perform skillfully. In the present training program those activities taught to at least a *minimally acceptable* level of proficiency included:

- (1) The identification and selection of charts that should be incorporated into tumor registry files.
- (2) The preparation of tumor registry abstracts in accordance with End Results Group procedures.
- (3) The proper utilization of a small number of standard references and job aids judged to be critical to the satisfactory performance of a tumor registrar.
- (4) The preparation of a follow-through record for present and former cancer patients.
- (5) The ability to satisfactorily define and/or utilize the standard medical vocabulary and abbreviations found in the chart of a cancer patient.

It should be emphasized that the training goal of this program is to prepare students so that they can *apply* ERG abstracting procedures to the filling out of a tumor registry abstract form. During the instruction many abstracting rules and procedures are memorized by the student. However, the goal is not to train a student to the point where all these rules are memorized but to emphasize using the Instructional Material for reference. The training goal, therefore, is to prepare students who can reliably and accurately abstract a medical chart by using the Instructional Package material and other reference aids provided during the course.

The training program that was developed introduced the trainee to practically all of the purposes, activities, and potential products of a tumor registry. In many instances these were discussed within the self-instructional packages. In other instances the trainees were provided with reference articles dealing with some aspect of the establishment or operation of a tumor registry. Some of the more important topics to which the trainees were introduced were:

- (1) The purposes of a tumor registry.
- (2) The products of a tumor registry.
- (3) The procedures for establishing a tumor registry.
- (4) The general procedures for coding information contained in a tumor registry abstract.
- (5) The general types of files established and maintained by a tumor registry.

The anticipated audience for this material would be:

- (1) Staffs of the tumor registries and registry systems supported all, or in part, by the End Results Section. In the immediate future the ERS intends to

promote the establishment of additional population-based registry systems. It is, therefore, anticipated that there will be an increased need for material to teach ERS abstracting/coding procedures.

- (2) Staffs of individual tumor registries that, although not supported by the ERS, utilize all or portions of ERS abstracting procedures.
- (3) Staffs of registries and registry systems that now employ the Classification of Extent of Disease version prepared by the California Registry System. This manual is in widespread use; it is estimated that upwards of 500 registries are currently employing it.
- (4) For the three-dimensional overlays, the wide variety of students and members of the general public who have a need or desire for understanding the anatomical relationships between the various parts and systems of the body.

Section II

GENERAL CHARACTERISTICS OF THE TUMOR REGISTRAR TRAINING PROGRAM

TRAINING PROGRAM FORMAT

The training program was designed to be completely self-contained and to be administered as a correspondence course. One of the basic features of a correspondence course is that it contains examinations that can be returned to a central location for scoring, with answers and comments returned to the student with the next block of instructional material. If desired, such procedures can be carried on within an individual hospital; that is, a member of the hospital staff can be assigned to administer the correspondence course, score the examinations with a scoring key prepared for the program, and return the scored examination, with appropriate comments, to the student with the next instructional package.

The basic characteristics of the tumor registrar training program are as follows:

(1) The instructional material is contained in 10 instructional packages. Each package contains an appropriate criterion examination. The table of contents for each instructional package and the Tumor Registrar Handbook is reproduced in Appendix A.

(2) Reference aids and job aids judged to be critical to successful job performance are distributed with certain instructional packages. Portions of the instructional packages are designed to teach the proper use of these job aids.

(3) Portions of the instructional material, especially on medical vocabulary, are presented in a programmed instructional format. Other blocks of instruction present fairly large chunks of instructional material followed by one or more practical exercises.

(4) All programmed instructional material is in a linear format. That is, no attempt is made to return the student to remedial blocks of instructional material when the student makes an error. Some of the procedures employed to correct student errors are discussed later in this report.

(5) Extensive use is made of self-scoring practical exercises. With most of these exercises, instructional comments provide additional information to the students on applying the abstracting rules taught during the program. The use of a standard set of instructional comments is one technique for providing information to correct potential student errors.

(6) Most of the practical exercises are specifically related to filling in one or more items on the detailed tumor registry abstract developed for the program. A copy of this abstract is included in this report as Appendix B.

(7) The student is provided with a Tumor Registrar Handbook containing a variety of job aids. The use of these job aids is taught during the program.

(8) Fifteen separate medical charts are distributed with the training program. Most of these charts are complete copies of medical charts selected from Charity Hospital, New Orleans. Patient and doctor identification has been removed from these training charts, and in some instances fake patient identification has been substituted.

TECHNIQUES FOR EVALUATING STUDENT PERFORMANCE

The training program makes extensive use of two general types of student evaluation procedures—self-diagnostic tests for use by the students and criterion tests that are scored and evaluated by a program coordinator.

One of the key characteristics of programmed instruction is that it continually provides trainees with a means for assessing their own performance. In the present program, a short block of instructional material is followed by a question that requires the student to demonstrate an understanding of the material. The student compares his answer with a *correct* answer given in some easy-to-find location in the instructional package. When he cannot answer the questions correctly, the student is instructed to restudy appropriate portions of the instruction. With this technique, the student is continually informed of his progress in the course.

The training program makes extensive use of practical exercises located at the end of major blocks of instruction. Many of these exercises require the student to abstract portions of a medical chart of a specific diagnostic or treatment report. Answers, plus instructional comments for the practical exercises, are located in a separate section of each instructional package. The use of self-corrected practical exercises provides the student with a means for evaluating his response to each exercise. This instructional procedure is especially useful for indicating to the student his ability to apply what he has just learned.

The criterion test developed for each instructional package is scored by a program coordinator. For each question a correct answer was prepared along with comments explaining why certain portions of each answer should have been prepared in a certain way. These instructional comments provide a review of material previously presented. In addition, they help the student generalize the instructional material to abstracting situations that may be difficult to handle.

The criterion test answers prepared by the trainees, and the correct answers and instructional comments pertaining to the test questions, are returned to the trainee. This provides another means for each student to assess his ability to appropriately abstract medical charts.

Detailed instructions for scoring the criterion tests are presented in Section VI of this manual. Please remember that both the criterion tests and the answers to the criterion tests are bound with the instructional material. As an illustration, the criterion test for Instructional Package 4 is bound as Segment V of Instructional Package 4. The answers to criterion test 5 are bound as Segment I of Instructional Package VI.

CONTENTS OF THE TUMOR REGISTRAR TRAINING PROGRAM

A single complete set of instructional material and job aids for this program would contain the following:

- (1) Ten individually bound self-instructional packages, each dealing with some aspect of the medical vocabulary and/or the rules required for abstracting the medical chart of a cancer patient.
- (2) A Tumor Registrar Handbook containing a manual of abstracting procedures plus other information of use to a tumor registrar.
- (3) A manual containing a classification scheme for extent of disease. This is located in Section K of the Handbook.
- (4) A set of diagrams which, when incorporated into the Extent of Disease manual, show the relationship between common primary sites for cancer and those organs and structures of the body located in the vicinity of these primary sites.

- (5) A set of color-coded overlay drawings which show the three-dimensional relationship between the various systems of the body.
- (6) A set of reference books and articles which include:
 - A medical dictionary (Dorland's)
 - Manual for Tumor Nomenclature and Coding (American Cancer Society)
 - *Human Anatomy Made Simple* (paper back textbook)
 - Miscellaneous articles on tumor registries

An overview of the contents of this program can be obtained by reading the Table of Contents for each Instructional Package and for the Handbook. These are located in Appendix A of this manual.

Section III

PREPARATION AND FIELD TEST OF INITIAL VERSION OF TRAINING PROGRAM

SELECTION AND SEQUENCING OF COURSE CONTENT

The content of this program was selected so as to prepare persons to satisfactorily complete a tumor registry abstract form using End Results Group abstracting/coding procedures. Adoption of this general training objective meant that the course had to stress the application of ERG procedures, and had to teach the skills and knowledges required to fill in the specific items on a tumor registry abstract.

The tumor registry abstract developed for this program (see Appendix D) contains spaces for recording 50 items of information. These 50 items are divided into five categories dealing respectively with:

- Patient Identification
- Biographical/Social/Medical History
- Medical Information, Diagnostic and Physical Findings
- Treatment Information
- Patient Follow-Through Record

The instructional content of the course was selected so that a trainee would learn how to search through a medical chart to locate the information required to complete each of the five main sections of the tumor registry abstract. The critical skills and knowledges required to perform the abstracting activity are covered in detail in the program. These include:

- (1) The capability to arrange the contents of a medical chart in chronological order, with similar items (history information, diagnostic information, Doctor's orders, progress notes, etc.) grouped together.
- (2) The knowledge of the type of information contained on each type of medical record report, sets of notes, and so forth and the skill to summarize this information in accordance with ERG procedures.
- (3) The knowledge of a basic cancer-related medical vocabulary so that appropriate medical chart information can be identified and summarized, and in particular so that the difficult-to-read handwriting, typically found in a medical chart, can be comprehended.
- (4) The capability to use tumor registry reference material so that decisions can reliably and accurately be made regarding what information should be recorded in the various blocks of the tumor registry abstract.

The general *sequence* of the course content can be determined by reference to Appendix A, which contains the table of contents for each of the 10 instructional packages that comprise the training program. The first two instructional packages contain a broad overview of the purposes, functions, activities, and products of a tumor registry. The purpose of this material is to provide the trainee with a broad context for understanding the detailed abstracting and patient follow-through rules presented in subsequent instructional packages. Also, the first two instructional packages are designed to provide the trainee with the information to answer the many general types of

questions which lay persons ask about the diagnosis and treatment of cancer and about the purpose of a cancer registry.

Instructional Packages 3-9 teach abstracting activities in the sequence in which they are usually performed by a tumor registrar. During this instruction, the functional context approach to instructional sequencing is used. Essentially, this approach involves presenting instructional material at the time when it is first required in order to perform an activity.

A tumor registrar performs a number of tasks not directly related to abstracting a medical chart. Some of these are discussed in Instructional Package 10. In presenting this material, considerable use is made of outside references. Instructional Package 10 contains discussions of the general procedures for coding tumor registry abstracts, the general procedures for preparing tumor registry reports, and the general procedures for establishing and operating a tumor registry.

PREPARATION OF INSTRUCTIONAL MATERIAL: GENERAL APPROACH

Any job position has certain characteristics that either simplify or complicate the preparation of instructional material for that position. For the tumor registrar, abstracting activities are fairly well structured in that a specific and quite detailed abstract can be prepared. The nature of this abstract, particularly if it is in detail, defines quite precisely the nature of the abstracting activity and the related training program. A detailed abstract was developed for this program and this step greatly simplified the selection, sequencing, and preparation of the instructional material.

Various procedures and rules have been developed for abstracting and coding tumor registry information. The most sophisticated of these has been developed by the End Results Group of the National Cancer Institute. To use ERG coding procedures reliably, a medical chart has to be carefully abstracted to ensure that the abstract contains all the information required to select from among various coding category alternatives. The decision to teach ERG abstracting procedures meant that the training program had to teach procedures much more complicated than those used by many existing tumor registries. This decision was made because it was judged that ERG procedures are more useful than other sets of simpler procedures, and are the ones that should be employed at tumor registries—assuming that there is a feasible means for teaching the procedures to registry personnel.

The general procedures for preparing the instructional material first involved gathering and reviewing material that had already been prepared by other registries and by the ERG. Whenever possible, portions of this material were incorporated into the training program. Considerable use was made of material from the ERG Coding Manual of 1967. In numerous instances, additional material was prepared to further explain this "borrowed" material.

The initial rough draft of the instructional material was prepared by subcontractor personnel and reviewed for medical correctness by a technical consultant provided by the prime contractor (Charity Hospital, New Orleans, Tumor Registry). The material was then reviewed by the director and a key staff member of the Charity Hospital Tumor Registry who concentrated on identifying and suggesting rewrites for portions of the material in conflict with their interpretation of ERG procedures. This corrected material was then returned to the subcontractor. It was rewritten as suggested by the technical consultants and then underwent editorial review. The material then was printed, put in instructional packages, and forwarded to the Technical Monitor of the program.

When time permitted, the instructional material was presented to one or two senior high school students who studied the material and identified portions that were difficult for them to comprehend. These portions were then rewritten.

PREPARATION OF INSTRUCTIONAL MATERIAL: MAJOR STEPS

Listed below in their approximate sequence are the more important steps taken during the preparation of this training program.

1. Gather and review explanatory material prepared by the End Results Group and by other tumor registries.
2. Identify the explanatory material and reference articles that would be incorporated into the training program.
3. Identify the general skills and knowledges required to complete each of the 50 items on the Tumor Registry Abstract.
4. Identify the basic cancer-related medical vocabulary required to:
 - a. Comprehend the various activities of a tumor registrar.
 - b. Comprehend the various portions of a medical chart.
5. Identify the instructional topics to be covered in each instructional package and determine the sequence.
6. Identify the ERG procedures and instructional points involved when covering each of the 50 items on the detailed abstract.
7. Select the general format for presenting the instructional material—programed instruction, text plus practical exercise, or graded series of practical exercises.
8. Identify the criterion behavior for each instructional package and prepare the criterion tests.
9. Prepare a series of practical exercises that would prepare the trainee for the criterion tests.
10. Prepare draft blocks of instructional material to prepare trainee for the practical exercises.
11. Administer the draft instructional material to one or two students, collecting in detail their comments and suggestions regarding how to improve the instructional material.
12. Rewrite material in accordance with student suggestions.
13. For each block of instruction, identify those references and job aids appropriate to the material.
14. Select and/or prepare suitable job aid material.
15. Submit the instructional material to the medical and registry consultants for technical review.
16. Rewrite the instructional reference material in accordance with the suggestions of the consultants.
17. Conduct an editorial review of the draft instructional material.
18. Print and package the instructional material for administration to experimental students.

FIELD TEST OF PROGRAM

The course was completely administered as a correspondence course to four groups of students. The first group began study of the program 19 July 1971. A total of 33 persons began the program. Of these, 31 completed the program with data in useable form. The students were employed at 24 hospitals located throughout the state of Louisiana. Two students were Blue Cross representatives; 31 were female.

Students for the experimental program were selected by sending letters to over 60 hospitals within the state of Louisiana, and by recruiting in high schools within the New Orleans metropolitan area. Each hospital was informed of the program and asked if they had one or more persons on their staff who wished to participate in the program. Seventy persons asked to participate in the program. Those finally selected were persons who were specifically associated with a hospital and who (with a few exceptions) were not familiar with the operation of a tumor registry. None of the students was familiar with End Result Group abstracting/coding procedures. Most of the students were young women with a high school education and considered to be at least average in intelligence. It was judged that the students of the experimental program were typical of those persons who might be available for employment as tumor registrars.

The procedures for administering the program were as described in Section IV of this manual.

RESULTS AND EVALUATION OF THE TRAINING PROGRAM

Table 1 contains a summary of the criterion test scores for each instructional package. Table 2 contains a summary of the times to study the instructional material and to complete the criterion tests. The results of the field test can be summarized as follows:

- (1) Eighty-eight percent of the trainees scored 70 or above on eight of ten instructional packages.
- (2) The highest overall criterion test scores were obtained for Instructional Packages 1 and 2.
- (3) The lowest scores were obtained for criterion tests 3 and 10.
- (4) On the average, it took 10 hours and 45 minutes to study each instructional package.
- (5) On the average, it took four hours to complete a criterion test.
- (6) An average of 150 hours was required to complete the course.

The program, as it existed in its first draft, was judged to be a success. However, the criterion test scores and the comments of the students indicated that the program contained two major flaws in need of correction. These were:

- (1) The training charts were extremely difficult to read (in the final program they will be re-written so that legible copies can be produced).
- (2) Training Chart #6, the chart used for criterion tests 3 and 10, is extremely difficult and confusing. This led to the low scores on these two criterion tests. (In the final program two simpler charts will be substituted for Chart #6 in the tests. Chart #6 will be reviewed in the body of the instruction material, and used in the practical exercises of IP-3 and IP-10.)

The above actions should improve the criterion test scores for IP-3 and IP-10. However, the time to study and take the test for these two IPs probably will not change significantly.

The experimental students scored especially poorly on the criterion test for Instructional Package 10. At least two reasons were identified to account for this poor performance. One reason, the use of Training Chart #6, has been briefly discussed. A second contributing factor was that toward the end of the experimental training program 16 students had yet to complete criterion test 10. Moreover, nine of these students had not completed criterion test 9. These "tardy" students were contacted by the Project Coordinator and asked to complete the program as rapidly as possible. This request was successful in that all 16 students contacted did rapidly complete the program, but their criterion test scores suffered significantly.

Table 1

**Criterion Test Scores Obtained During Field Test of
Tumor Registrar Training Program**
(Maximum Score Per Criterion Test = 100; N = 31)

	Criterion Test									
	1	2	3	4	5	6	7	8	9	10
Median Score	88.8	86.5	71.8	74.3	71.5	73.6	70.9	81.0	70.9	62.5
1st Quartile Score	83.0	91.8	66.0	80.0	78.2	76.7	75.9	84.5	77.4	48.5
3rd Quartile Score	92.0	96.9	76.0	83.1	81.5	78.2	82.4	88.0	85.0	73.7
Range										
Minimum Score	68	77	62	57	57	68	55	74	56	25
Maximum Score	100	100	90	89	95	94	91	93	100	88
Percentage of Scores										
Below 70	3.2	0.0	38.6	6.4	19.3	3.2	12.9	0.0	22.5	60.9
Below 65	0.0	0.0	16.1	3.2	6.4	0.0	3.2	0.0	3.2	57.7

Table 2

**Times Required to Study Each Instructional Package and
Complete Each Criterion Test**

	Instructional Package ^a									
	1	2	3	4	5	6	7	8	9	10
Median time to study instructional material	9:00	8:00	11:30	9:45	14:00	10:00	12:15	11:30	9:30	14:00
Median time to complete criterion test	1:45	2:30	4:15	3:00	6:00	4:00	4:00	4:00	5:00	3:00
Median time to study material and complete test	10:45	10:30	15:45	12:45	20:00	14:00	16:15	15:30	14:30	17:00

^aTime listed in hours and minutes: 1:45 = 1 hour and 45 minutes.

(1) For those 15 students who completed the training program without special prodding:

- Their median score for criterion test 10 was 69.0.
- Their scores ranged from 50 to 88.

(2) For those 16 students who completed the program after prodding:

- Their median score for criterion test 10 was 54.0.
- Their scores ranged from 25 to 80.

Section IV

ADMINISTRATIVE PROCEDURES

The general administrative procedures for the program are quite simple to apply. If need be, it can be administered by someone unfamiliar with the contents of the program, although, this is not recommended. A person familiar with the techniques of medical chart abstracting should be used to grade the criterion tests.

GENERAL PROCEDURES

The general procedures for administering the training program are as follows:

(1) Instructional Package 1 is forwarded to the trainee. This package contains instructions on how to study the instructional material, and on how to answer and then return the criterion test to the Training Program Coordinator. It is suggested that the trainee take no more than two weeks to study the instructional material and return the criterion test. Preferably, the trainee will be given two-three hours per day, *during working hours*, for study.

(2) The criterion test is completed by the trainee and then returned to the program coordinator.

(3) The program coordinator scores the criterion test and returns it to the student along with a set of standard comments that explain the answers to the criterion test. These comments were developed as part of the instructional program.

(4) It takes 15 to 30 minutes to grade a single criterion test. More time would be required if comments are provided which are specifically related to each student's answers. This preferred commenting procedure is too time consuming when administering the course to large numbers of students.

(5) The next instructional package is forwarded to the trainee along with the answers and comments to the criterion test for the previous instructional package.

(6) This cycle continues until all instructional packages have been distributed to the trainees.

(7) The Tumor Registrar Handbook, along with appropriate tabs for the various Handbook sections, is distributed to the student with Instructional Package 1. Sections of the Handbook are sent out with the various instructional packages of the program. Each section of the material is distributed with the particular instructional package to which it first applies.

(8) Two complete training charts are distributed with each of the first seven instructional packages. One chart is distributed with Instructional Package 8.

DISTRIBUTION OF INSTRUCTIONAL PACKAGES (IPs)

The IPs should be distributed in sequence, beginning with IP-1. The next IP should not be forwarded to a student until the student has returned the criterion test for the previous instructional package. This criterion test should be graded and returned along

with the next Instructional Package. With this procedure, the student will always begin the next Instructional Package by a study of the answers to the criterion test for the previous package.

DISTRIBUTION OF REFERENCE AIDS AND HANDBOOK MATERIAL

The schedule for distribution of reference aids, handbook material, and "outside readings" is presented elsewhere in this Section. This schedule must be followed or the student will not be able to study portions of the lesson book, perform portions of the practical exercises, or answer certain of the criterion test questions.

TIME REQUIRED TO STUDY EACH INSTRUCTIONAL PACKAGE

The typical student should require no more than 15-20 hours to study each Instructional Package. However, students may become ill, go on vacation, or have an increased workload for short periods of time. A student should be requested to progress through the program at the rate of one IP every two weeks. The packages can be studied at a faster rate if the student wishes to do so. A student who fails to return the criterion test within the two-week period should be contacted by letter or telephone to ascertain the reason for the delay. The student should be urged to study each IP and return each criterion test within a reasonable period of time—within three weeks at the most. If the student, for some reason judged to be legitimate by the program administrator, must take longer than four weeks to complete an Instructional Package, extra time may be given at the discretion of the program administrator. The primary objective of this program is training tumor registrars within a reasonable period of time. Each program administrator has the option of judging what period of time is "reasonable."

PROCEDURES FOR SCORING CRITERION TESTS

Section VI of this manual contains the scoring keys for the criterion test for each Instructional Package. For those questions which require the student to prepare all or portions of an abstract, answer abstracts have been prepared along with abstracting comments.

It is not feasible to spell out in complete detail the procedures for grading student abstracts. The grading process is one of comparing the student abstract with an answer abstract. To make such a comparison, the person grading the abstract should be knowledgeable regarding the abstracting rules taught in the program. For this reason it is recommended that someone familiar with abstracting be used to score the criterion tests. This person should be familiar with the training charts used in the training program. Preferably this person will have studied the instructional material and have taken the criterion tests.

The answer abstracts are scored by determining whether the student's answer is:

- Almost or completely correct. Full credit is given for such an answer.
- Partially correct, but one or more portions of the answer missing or incorrect. One-half credit is given for such answers.
- Mostly incorrect, because of incorrect or missing information. No credit is given.

Detailed guidance for scoring the criterion tests is presented in Section VI. Guidelines for handling complex scoring problems are presented in that section.

SECTION V

DISTRIBUTION OF TRAINING AND EXERCISE MATERIAL AND JOB AIDS

Listed below and on the following pages are the materials which should be distributed with the Instructional Packages of this program. The distribution tables have been organized in terms of the four major types of material distributed with the packages. These are:

- Training Charts
- Blank Abstract Forms
- Tumor Registrar Handbook Material
- Job Aids and "Outside Readings"

DISTRIBUTION OF TRAINING CHARTS

A total of 15 training charts are used in the program. Each is an almost complete copy of a chart abstracted by the tumor registry staff of Charity Hospital, New Orleans, Louisiana. For any particular Instructional Package, the student may be required to abstract all or portions of a chart. Three charts—Charts #5, #6, and #17—are distributed in an unorganized fashion. Each chart is separately bound. To distribute the charts, they should be enclosed in the package of material being sent to the student. Table 3 lists the training charts to distribute with each Instructional Package.

Table 3

Distribution of Training Charts

Instructional Package	Training Charts
1	#1 & #31
2	#6 & #19
3	#5 & #17
4	#7 & #11
5	#14 & #32
6	#13 & #40
7	#22 & #26
8	#4
9	None
10	None

DISTRIBUTION OF BLANK ABSTRACT FORMS

The practical exercise material and the criterion tests require the student to complete many abstract forms. In most instances the student is required to complete only

certain pages of the abstract form, those pages associated with the instructional material contained in a particular Instructional Package. On occasion, the student is asked to complete all portions of the abstract form studied so far in the program.

Beginning with IP-3 the students fill out portions of the abstract form during both the practical exercises and criterion test. Table 4 shows the abstract items found on each double page of the abstract. Table 5 lists the number of abstract pages that should be distributed, per Instructional Package, to each student.

Table 4
Information Items on Each
Double Page of
the Detailed Abstract Form

Abstract Page	Information Item on Abstract Page
1 - 2	1 through 16
3 - 4	17 through 21
5 - 6	22 through 32
7 - 8	33 through 37
9 - 10	38 through 43
11 - 12	44 through 45
13 - 14	46 through 49
15 - 16	50

Table 5
Distribution of Abstract Pages per
Instructional Package to Each Student

Instructional Package	Number of Copies
IP-1	None
IP-2	None
IP-3	20 copies pp. 1-2, 3-4
IP-4	25 copies pp. 1-2, 3-4
IP-5	40 copies pp. 5-6 10 copies pp. 1-2, 3-4, 5-6
IP-6	25 copies pp. 5-6 5 copies pp. 1-2, 3-4, 5-6
IP-7	5 copies pp. 1-2, 3-4, 5-6, 7-8
IP-8	10 copies pp. 9-10 5 copies pp. 1-2, 3-4, 5-6, 7-8, 9-10
IP-9	15 copies pp. 9-10, 11-12 5 copies pp. 11-12
IP-10	15 copies pp. 13-14, 15-16

Note: Staple each copy containing multiple sheets.

UTILIZATION OF TRAINING CHART MATERIAL

The training program utilizes 15 bound copies of medical charts. Portions of these are abstracted during various practical exercises and for various criterion tests. In addition, portions of medical charts, having various coded labels, are used in the practical exercises. Tables 6 and 7 show:

- The Instructional Package which utilizes each complete or partial chart.
- The abstract items filled in during a specific exercise or criterion test.
- Where the chart is used—practical exercise or criterion test.

DISTRIBUTION OF TUMOR REGISTRAR HANDBOOK MATERIAL

The Tumor Registrar Handbook developed for this course contains 12 sections. The handbook should be distributed with Instructional Package 1. At this time the handbook should contain:

- A Table of Contents page.
- Twelve tabbed divided pages labeled A through L respectively.

With some exceptions, the handbook material is located in Segment IV of the Instructional Package that first makes use of the material. The student removes the material and relocates it in the appropriate section of the handbook.

The main exception to this procedure can be Section K, which contains information on how to classify extent of disease for tumors located at various primary sites. This is a bulky section and could be distributed under separate cover (in a large envelope or a small notebook). Listed in Table 8 are the various sections of the Handbook and the Instructional Package with which each section should be distributed. Note that Section A, the Manual of Procedures, is distributed in eight separate sections.

DISTRIBUTION OF REFERENCES AND "OUTSIDE READINGS"

A dictionary and a number of reference books are used in the training program. These are distributed along with the first Instructional Package to which they pertain. They are listed in the Table of Contents under Segment VI.

With a few Instructional Packages, especially IP-10, "outside readings" are distributed. These are articles about tumor registries. Most of these articles have their own cover, so they can be distributed along with an Instructional Package. A few articles have been reprinted and located in Segment VI of the Instructional Package. Listed in Table 9 are the references and "outside readings" distributed with each Instructional Package.

FORM FOR RECORDING STUDENT QUESTIONS

During the initial administration of this training program, students were given a simple form which they used to record any questions they had about the instructional material and/or the answers to the practical exercises or criterion test questions. The Project Coordinator answered all questions by return mail or, in the case of urgent questions, by phone.

The use of a Student Question Form was found to be very useful. It is recommended that such a form be employed, using any format judged suitable by the Project Coordinator.

Table 6
Utilization of Training Chart Material During Practical Exercises

Chart No.	Abstract Items Filled in During Exercises							
	1-8	9-17	18-21	22-27	28-37	38-46	47-50	Organize ^a
Complete Charts								
1		IP-3	IP-4	IP-5				
4								
5					IP-6			IP-3
6			IP-4					
7							IP-10	
11		IP-6	IP-6	IP-6	IP-6		IP-10	
13		IP-7	IP-7	IP-7	IP-7			
14								
17							IP-10	
19					IP-6			
22			IP-4					
26						IP-8		
31		IP-3	IP-4	IP-5		IP-8		
32								
40						IP-9		
Partial Charts								
29			IP-4					
41.0	IP-5	IP-5	IP-5	IP-5				
51.7	IP-5	IP-5	IP-5	IP-5				
1C-						IP-8		
2C-						IP-8		
4C						IP-8		
1Rx						IP-9		
2Rx						IP-9		
4Rx						IP-9		
6Rx						IP-9		
7Rx						IP-9		
Jane Doe #1					IP-5			
Jane Doe #3					IP-5			
10-00-00	IP-3	IP-3						
10-10-10				IP-6	IP-6			
11-19-46			IP-4					
20-20-20					IP-6			
25-35-45	IP-3	IP-3						
30-00-00			IP-4		IP-6			
34-24-34	IP-3	IP-3						
36-38-38			IP-4					
38-38-38			IP-4					
40-00-00			IP-4					
80-00-00			IP-4					

^aStudent given an unorganized chart and asked to organize it.

Table 7

Utilization of Training Chart Material During Criterion Tests

Chart No.	Abstract Items Filled in During Criterion Tests							
	1-8	9-17	18-21	22-27	28-37	38-46	47-50	Organize
Complete Charts								
1					IP-6	IP-9	IP-10	
4		IP-8	IP-8	IP-8	IP-8	IP-8		
5			IP-4	IP-5		IP-9	IP-10	
6		IP-3	IP-6	IP-6	IP-6	IP-9	IP-10	IP-3
7		IP-5	IP-5	IP-5	IP-6			
11								
13						IP-9	IP-10	
14						IP-8		
17			IP-4	IP-5	IP-6			
19		IP-3	IP-4	IP-5				
22		IP-7	IP-7	IP-7	IP-7	IP-9	IP-10	
26								
31					IP-6			
32						IP-9		
40		IP-7	IP-7	IP-7	IP-7			
Partial Charts								
Jane Doe #5			IP-4		IP-6			
10-00-00					IP-6			
20-00-00	IP-3	IP-3			IP-6			
70-00-00	IP-3	IP-3	IP-4		IP-6			
80-00-00					IP-6			
90-00-00			IP-4					

Table 8
Distribution of Handbook Material

Instructional Package	Handbook Section
1	----- C Rationale for the Design and Utilization of Tumor Registry Abstract Forms ----- Notebook Cover, Table of Contents, Tabbed Divider Pages
2	----- D Lists of Reportable Neoplasms and Nonreportable (Benign) Neoplasms
3	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 1st section. ----- E Sources of Information in a Medical Chart
4	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 2nd section.
5	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 3rd section. ----- F Categories and Techniques of Diagnosis
6	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 4th section. ----- K Classification of Extent of Disease (can be distributed under separate cover)
7	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 5th section. ----- D Classification of Some Common Neoplasms
8	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 6th section. ----- G Categories of Treatment ----- H Cancer Treatment: Lists of Terms
9	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 7th section.
10	----- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient. 8th section. ----- I S.N.C.P. Histology Code (can be distributed separately) ----- J Primary Site Classification: Major Divisions and Subdivisions (Including SNDO and ICD Codes) (can be distributed separately) ----- L A Selected List of Tumor Registry Job Aids and References.

Table 9

Distribution of References and "Outside Readings"

Instructional Package	Reference or "Outside Reading"
1	American Cancer Society. <i>The Hospital Cancer Registry—Definition, Purpose, Value, Operation, and Cost</i>, New York, 1966. (Enclosed in Segment VI) Dorland's <i>Illustrated Medical Dictionary</i>, 24th Edition, W.B. Saunders Co., Philadelphia & London, 1965. (Distributed under separate cover)
2	"List of Common Neoplasms," from <i>Understanding Medical Terminology</i>, 4th Edition, by Sister Agnes Clare Frenay, Catholic Hospital Association, St. Louis, Missouri, 1969. (Enclosed in Segment VI) American Cancer Society. <i>Manual of Tumor Nomenclature and Coding</i>, 1968 Edition (Red Book). (Distributed under separate cover)
3	None
4	None
5	None
6	None
7	I. MacKay Murray, M.D. <i>Human Anatomy Made Simple</i>, Doubleday & Co., Inc., Garden City, New York, 1969. (Distributed under separate cover)
8	None
9	"Chemotherapy and Hormonal Agents List," prepared by American College of Surgeons.
10	American Cancer Society. <i>The Hospital Cancer Registry—Definition, Purpose, Value, Operation, and Cost</i>, New York, 1966. American College of Surgeons. <i>Guidelines for Cancer Care</i>, Chicago, Illinois, 1970. American College of Surgeons. <i>Manual for Cancer Programs</i>, 1966 Fink, C. Dennis. <i>Establishment of a Tumor Registry System for Louisiana: Proposals on Objectives, Capabilities, and Structure</i>, HumRRO Technical Report 70-101, June 1970. Ringel, Abraham. <i>The Cancer Registry, Regional Medical Programs Services, Health Services and Mental Health Administration</i>, U.S. Department of Health, Education, and Welfare, Rockville, Maryland, March 1970. (All IP-10 "outside readings" are distributed under separate cover)

Section VI

CRITERION TEST SCORING PROCEDURES

A wide variety of question formats—matching, multiple-choice, true-false, short essay, fill-in—are used in the Criterion Tests. This section contains fairly specific instructions for grading and scoring these various types of questions. In addition, the criterion tests contain questions which require the student to abstract all or portions of a training chart. These questions can be difficult to grade, so this section presents in detail the scoring key for the detailed abstract and the procedures for applying this key.

SCORING GUIDANCE FOR EACH ABSTRACT ITEM

Table 10 contains detailed guidance for scoring each item of the detailed abstract. This guidance is by necessity somewhat complicated so it should be studied carefully before attempting to apply it.

The columns of Table 10 contain the following information:

- **Abstract Item:** The number of a specific abstract item is recorded. For some items each row of the table contains information about a portion of an item; for example, Item 6 is divided into 6a, 6b, and 6c.

- **Number of Entries:** The figures in the column refer to the number of discrete units of information that should be entered for the entire item. Item 2, for example, requires six information entries, each of which describes a portion of the patient's address: City/Town; House and/or Apartment Number; Street Name or Number; County; State; Zipcode.

The letter "V" means that a variable number of information entries can be made for a particular abstract item. This would depend on such things as the completeness of the chart information, the history of the patient, the nature of the diagnosis and treatment, and so on.

Each abstract item has been classified as either a Standard Entry Item or a Variable Entry Item.

- For a *standard entry item*, a fixed or standard number of blanks should be filled in, boxes should be filled in or checked, or descriptions should be recorded. As an example: Item 6 calls for a total of nine separate units of information, and something should be recorded for each of these nine units; in many instances this will amount to recording N/A (not applicable), Unk (Unknown), or "--" to indicate missing or not-available information. As other examples: Item 42c requires two responses, both descriptions; Item 43a requires 16 separate responses or entries.
- For *variable entry items*, the number of separate entries for an item cannot be predicted; it will depend on the nature of the case described in the chart. As examples: The correct answers for abstract Items 11 and 12 may contain more than one response, depending on the medical history of the patient and patient's family; Item 16 requires a variable response, and part "c" of this

item may or may not be filled in, depending on the nature of the case being abstracted. The entry "V-3" means that a variable number of information entries can be made, with the maximum number seldom (if ever) exceeding three.

• Scoring Options: The information recorded for a particular abstract item can be scored as:

Completely correct or incorrect (I/C). This applies to these items or portions of items where the information cannot be partially correct or where a decision was made not to award partial credit. For example, four entries can be made for Item 1; each of these four entries can be scored as completely correct or completely incorrect.

Completely correct, partially correct, incorrect. There are certain abstract items where the information is recorded in the abstractor's own words (Item 18 is an example). When scoring the answers for such items the scorer must judge the degree to which the answer is correct. This can be a difficult judgment to make. To assist in scoring "partially scorable" (PS) items the following guidance is offered:

-- Ignore differences in words and phrases between the student and the "answer" abstract.

-- Judge correctness in terms of whether or not the student abstract contains the same information, and all the information, that is contained in the answer abstract. Judge the student answer as:

At least mostly complete and not misleading—give complete credit.

Partially incomplete and/or partially misleading—give partial credit.

Mostly incomplete and/or quite misleading—give no credit.

For many abstract items it is more important that the recorded information be correct (not misleading) than complete. As an example, suppose the answer to Item 27 (extent of disease) were missing. This is a very important item of information. If it is missing on the abstract, the abstractor may be asked to re-examine the chart for the purpose of locating information on extent of disease. However, suppose the abstractor had recorded incorrect information in Item 27d. This mistake probably would not be detected. The result would be a very serious error; incorrect information would be incorporated into the tumor registry and could contribute to misunderstandings regarding the relationship between extent of disease, symptoms at time of first diagnosis, and treatment effectiveness.

• Maximum Raw Score. Each item of the abstract has been judged with respect to its importance and the ease with which information for filling it can be obtained from chart material. Item importance was judged in terms of the degree to which the information helped provide an accurate and complete description of the diagnosis or treatment of a patient, and/or patient follow-through information. The results of this judgmental process have been converted into a Maximum Allowable Raw Score (MARS) for each Abstract Item. Those items having a higher allowable score were judged to be more important and/or difficult to fill in than those items having a lower allowable score.

• Number of Points for Each Correct Entry (Answer). This column describes the number of points or credits to give to each correct entry for an Abstract Item.

•• Standard Entry Items. These items are the easiest to score. As an illustration, Item 1 has an allowable maximum score of 2 points. The scoring option is I/C—each entry for the item is scored as completely correct or completely incorrect. Four separate entries are required for this item, so each separate correct entry is worth 1/2 a point.

Table 10
Scoring Key for Use With Detailed Abstract Form

Abstract Item	No. of Entries	Scoring Options	Maximum Allowable Raw Score	No. of Points per Correct Answer		Comment
				Standard Entry Items	Variable Entry Items	
1	4	I/C	2	1/2		
2	6	I/C	2	1/3		
3	3	I/C	1	1/3		
4	4	I/C	1	1/4		
5	3	I/C	1	1/3		
6a	3	I/C	1	1/3		
6b	3	I/C	1	1/3		
6c	3	I/C	1	1/3		
7	3	I/C	1	1/3		
8	3	I/C	2	2/3		
9	6	I/C	6	1		
10	3	I/C	2	2/3		
11	V-4	I/C	2		2/NPCA	
12a	V-3	I/C	2		2/NPCA	
12b	V-3	I/C	2		2/NPCA	
13	3	I/C	2	2/3		
14	V-2	I/C	1		1/NPCA	
15	V-4	I/C	3		3/NPCA	
16	V-4	I/C	4		4/NPCA	
17	V-3	I/C	3		3/NPCA	
18a	V-4	I/C	2		2/NPCA	
18b	V-4	I/C	2		2/NPCA	
18c	V-2	I/C	2		2/NPCA	
19	V-5	I/C	3		3/NPCA	
20	V-5	I/C	3		3/NPCA	
21	V-4	I/C	2		2/NPCA	
22	V-6	PS	12		12/NPCA	No. of separate Dx reports or statements.
23	4	I/C	2	1/2		
24	V-4	I/C	4		4/NPCA	
25	V-2	I/C	2		2/NPCA	
26	1	I/C	1	1		
27	5	I/C	10	2		
28a	V-3	I/C	3		3/NPCA	
28b	V-3	I/C	4		4/NPCA	
29a	1	I/C	3	3		

(Continued)

Table 10 (Continued)
Scoring Key for Use With Detailed Abstract Form

Abstract Item	No. of Entries	Scoring Options	Maximum Allowable Raw Score	No. or Points per Correct Answer		Comment
				Standard Entry Items	Variable Entry Items	
29b	1	I/C	4	4		
30a	1	I/C	3	3		
30b	1	I/C	4	4		
31a	1	PS	6	6		(½ score if correctly selected "regional" but chose incorrect regional subcategory)
31b	4	I/C	2	1/2		
32	V-3	I/C	2		2/NPCA	
33a	V-2	PS	2	2/NPCA		Partial credit for description
33b	V-2	PS	2	2/NPCA		Partial credit for description
33c	V-3	I/C	2		3/NPCA	
34	1	PS	6	6		(½ score if chose correct stage but incorrect substage (A or B).
35	V-2	I/C	2		2/NPCA	
36	V-30	I/C	3	3/30		
37	V-28	I/C	3	3/28		
38	1	I/C	2	2		
39	V-2	I/C	2		2/NPCA	
40	V-3	PS	3		3/NPCA	PS for descriptions
41a	V-3	I/C	1		1/NPCA	
41b	V-3	I/C	1		1/NPCA	
42a	V-3	I/C	2		2/NPCA	
42b	V-2	I/C	4		4/NPCA	
42c	2	PS	4	2		PS for each description
43a	16	I/C	10	5/8		
43b						
44A1	9	I/C	5	5/9		
44A2	V-14	I/C	5		5/NPCA	
44C1	5	I/C	5	1		
44C2	V-8	I/C	5		5/NPCA	
45a	11	I/C	7	7/11		
45b						
45—List of Agents	V-10	PS	3		3/NPCA	
46	V-3	PS	2		2/NPCA	Where each separate description = 1 ans.
47	V-4	PS	10		10/NPCA	Each separate Rx description = 1 ans. PC for descriptions
48	12	PS	5	5/12		12 blocks to fill in. PC for description of findings
49	14	I/C	7 per report	1/2		Each separate report worth 7 points
50	V-5	PS	2		2/NPCA	PC for descriptions.

For Standard Entry Items, the maximum allowable point score for each separate entry is determined by dividing the maximum allowable raw score by the number of entries for that abstract item.

Illustrations:

- Abstract Item 5 has a maximum allowable raw score of 1 point; it requires three entries; therefore, each entry or answer is worth 1/3rd of a point.
- Abstract Item 42 has a maximum allowable score of 10 points. This 10 points has been distributed so that Item 42c is allowed 4 points. Item 42c requires two descriptive entries, so each entry is worth 2 points. Descriptive responses are considered to be "partially scorable", that is, partial credit can be given if, in the scorer's judgment, the answer is partially but not completely correct. Thus, for Item 42cl, a student's answer could receive credit ranging from 0 to 2 points. When assigning partial credit, judge the amount to award in terms of the following five categories:

0%
25%
50%
75%
100%

- Variable Entry Items. As described previously, there are certain abstract items for which the complete answer or entry will be composed of one or more discrete items of information. The number of discrete information items will depend on the nature of the case being abstracted. These abstract items are those for which a "V" has been placed in the "No. of Entries" column of Table 10. The procedure for scoring these abstract items is as follows:

- Look at the answer abstract and count the number of discrete information items contained in the answer. As an illustration, assume that for Item 18a a total of four significant symptoms had been recorded on the answer abstract. A completely correct student answer should contain correctly listed all four symptoms.
- Divide the Maximum Allowable Raw Score for an item by the number of possible correct answers (NPCA). To illustrate, the MARS for Item 18a is 2 points. If the NPCA is four, then each correct answer would receive a point credit of 1/2 point.

For Variable Entry Items, the maximum allowable point score for each separate entry is determined by dividing the maximum allowable raw score by the number of possible correct answers (or entries).

Illustrations:

Item 22 is a Variable Entry Item and each separate entry or answer can be partially scored. Suppose the answer abstract contains four entries of Item 22: reports of X-ray findings, a pre-operative PD report, a post-operative PD report, and a "statement of examining physician." Thus, the complete answer for Item 22 is composed of 4 discrete answers, each worth a maximum of 3 points (maximum allowable raw score of 12 divided by 4, the number of possible correct answers). Each of the four discrete answers can be written in the abstractor's own

words or can be composed of words and phrases extracted for a report. In the judgment of the scorer, each answer might be completely incorrect, or partially or completely correct. For such answers partial credit can be assigned in amounts of 25, 50, or 75% of the maximum allowable raw score. Therefore, each of the four separate answers presumed in this illustration could receive a score of 0, $1/2$, 1, $1\frac{1}{2}$, or 2 points.

The amount of partial credit to award can be difficult to judge. The example above awards credit in amounts of either 0, 25, 50, 75, or 100% of the total maximum allowable raw score. Sometimes it is difficult to decide whether a 25 vs. 50% credit, or a 50 vs. 75% credit should be awarded. An alternative, and one to follow for difficult scoring problems, is to award either 0, 50 or 100% credit. With this procedure you decide whether the answer is close enough to being completely correct to merit 100% credit, or close enough to being completely incorrect to merit no credit. For any other condition, award 50% credit. Most people find this score award procedure fairly easy to apply. Over the length of the course it will make little difference whether you award three or one level of partial credit. However, whatever scoring rules you use, use them consistently.

CONVERSION OF RAW SCORES TO GRADE POINTS

For each criterion test, the maximum grade assigned to each question has been arranged so that the sum of the grades adds up to 100 points. For example, if a criterion test contained a total of ten questions each judged to be of equal importance, each question would be assigned a maximum grade of 10 points.

Most criterion tests are composed of questions judged to be of unequal importance with respect to the degree to which these questions assess the capability of a tumor registrar. In all instances, questions that involve the actual preparation of a portion of an abstract have been given more weight; they have been assigned a higher grade score. These grade assignments are shown in Table 10.

The raw score that a student obtains for an abstracting test item must be converted into a grade score. To accomplish this, the raw score must be multiplied by a conversion factor which in turn is determined by the maximum grade assigned to that test item. For example:

- The criterion test question might be "to complete Items 1 through 8 of the abstract for Charts #1 and #31."
- With reference to Table 11, the maximum allowable raw score for Items 1 through 8 totals 13. A complete correct answer would be awarded 13 raw score points.¹
- Assume now that there was one incorrect entry on Item 1 ($-1/2$ point) and two errors on Item 8 ($-1\frac{1}{3}$ points). The student's total raw score would be $13 - 1\frac{1}{2}$ or $11\frac{1}{2}$ raw score points ($1/2$ plus $1/3$ add up to $5/6$ th).

¹Table 11 provides multipliers for converting maximum allowable raw score credit points into grade score credit points, for use with solid tumors only; Table 12 provides similar information for use with Hodgkin's disease, leukemia, and other diseases as noted.

- In this illustration, 13 raw score points can be obtained; the maximum grade for the question is 10. The relationship therefore, is 10/13 (maximum grade over maximum raw score) or .77 (see Table 11).
- Raw score is converted to grade score by multiplying the raw score by the conversion factor describing the relation between raw score and assigned grade score. For this illustration, approximately 8.5 grade points. Round off to the nearest whole number, or in the cases of 8.5, 9.5, etc., to the next highest number:

$$11 \frac{1}{6} \times .77 = \text{approximately } 8.5, \text{ or } 9$$

Other illustrations are as follows:

- (1) Question: Complete abstract Items 9 through 17 for Chart #4.
 - Sum of maximum allowable raw scores is 27 (from Table 11).
 - Assume maximum grade score is 20.
 - Assume student obtains a total raw score of 22.
 - Relation between raw and grade scores is 20/27 or .74 (from Table 11).
 - Student grade is $22 \times .74$ or 16.3 grade points.
 - Round off to 16, nearest whole number.
- (2) Question: Complete abstract Items 18 through 27 for Chart #6.
 - Sum of maximum allowable raw scores is 44 (from Table 11).
 - Assume assigned maximum grade score is 25.
 - Assume student obtains a total raw score of 34.
 - Relation between raw and grade scores is 25/44 or .57 (from Table 11).
 - Student grade is $34 \times .57$ or 19.4 grade points.
 - Round off to 19, nearest whole number.
- (3) Question: Complete abstract Item 22 for Chart #22.
 - Sum of maximum allowable raw score is 12 (from Table 10).
 - Assume assigned maximum grade score is 15.
 - Assume student obtains a total raw score of 10.
 - Relation between raw and grade scores is 15/12 or 1.25.
 - Student grade is 10×1.25 or 13 grade points.

Table 11

**Conversion Multipliers for Converting Maximum Allowable
Raw Score Credit Points Into Grade Score Credit Points:
Use for Solid Tumors Only**

Abstract Items	Maximum Allowable Raw Score	Maximum Allowable Grade Score						
		7	10	12	15	20	25	30
1-8	13	--	.77	--	1.15	1.54	1.92	2.21
1-17	40	--	.25	--	.38	.50	.63	.75
9-17	27	--	.37	--	.55	.74	.93	1.11
1-21	54	--	.18	--	.28	.37	.46	.56
9-21	41	--	.24	--	.37	.49	.61	.74
18-21	14	.50	.71	--	1.07	1.43	1.78	2.14
1-27	85	--	.12	--	.18	.23	.29	.35
9-27	72	--	.14	--	.21	.28	.35	.42
18-27	44	--	.23	--	.34	.45	.57	.68
22-27	31	--	.32	--	.48	.65	.81	.97
1-32	116	--	.09	--	.13	.17	.22	.26
9-32	103	--	.10	--	.15	.19	.24	.29
18-32	75	--	.13	--	.20	.27	.33	.40
22-32	62	--	.16	--	.24	.32	.40	.48
28-32	31	--	.32	.39	.48	.65	.81	.97
1-42	135	--	.07	--	.11	.15	.18	.22
9-42	122	--	.08	--	.12	.16	.20	.25
38-42	19	--	.53	--	.79	1.01	1.32	1.58
1-46	177	--	.06	--	.08	.11	.14	.17
9-46	164	--	.06	--	.09	.12	.15	.18
18-46	136	--	.07	--	.11	.15	.18	.22
22-46	123	--	.08	--	.12	.16	.20	.24
38-46	61	--	.16	--	.25	.33	.41	.49
1-50	201	--	.05	--	.07	.10	.12	.15
9-50	188	--	.05	--	.08	.11	.12	.15
18-50	160	--	.06	--	.09	.12	.16	.19
38-50	85	--	.12	--	.18	.24	.29	.35
47-50	24	--	.42	--	.62	.83	1.04	1.25

NOTES: • This table for use with solid tumors only; Items 33 through 35 have not been included in the Maximum Allowable Raw Score (MARS).

• Items 36 and 37 have not been included in the MARS.

Table 12

**Conversion Multipliers for Converting Maximum Allowable
Raw Score Credit Points Into Grade Score Credit Points:
Use for Hodgkin's Disease, Leukemia, Lymphosarcoma,
Reticulum Cell Sarcoma, Multiple Myeloma, and Other Lymphomas**

Abstract Items	Maximum Allowable Raw Score	Maximum Allowable Grade Score				
		10	15	20	25	30
1-8						
1-17						
9-17				See Table 11		
1-21						
9-21						
18-21				See Table 11		
1-27						
9-27						
18-27						
22-27				See Table 11		
1-35	99	.10	.15	.20	.25	.30
9-35	86	.12	.17	.23	.29	.35
18-35	58	.17	.26	.35	.43	.52
22-35	45	.21	.33	.44	.56	.67
33-35	14	.71	1.07	1.43	1.78	2.14
1-42	118	.08	.10	.17	.21	.26
9-42	105	.10	.14	.19	.24	.29
38-42	19	.53	.79	1.05	1.31	1.58
1-46	160	.06	.09	.12	.16	.19
9-46	147	.07	.10	.14	.17	.20
18-46	119	.08	.13	.17	.21	.25
22-46	106	.09	.15	.19	.26	.28
38-46	61	.16	.25	.33	.41	.49
1-50	184	.05	.08	.11	.14	.16
9-50	161	.06	.09	.12	.16	.19
18-50	143	.07	.10	.14	.17	.21
38-50	85	.12	.18	.24	.29	.35
47-50	24	.42	.62	.83	1.04	1.25

Section VII

MAXIMUM POINT VALUE FOR CRITERION TEST QUESTIONS

This section contains the scoring key for each of the 10 criterion tests for this program. Each criterion test is divided into two or more exercises (or segments). Within each exercise there are usually two or more questions or situations to which the student must respond. The maximum point value for each question or situation is listed in the Scoring Key. Point values have been assigned to reflect the judged importance of the question. Also, values have been assigned so that the total possible point score or grade will equal 100 points.

Turning to the Scoring Key for Instructional Package 1 (Table 13) you will notice that:

- There are three separate exercises.
- Exercises A, B, and C contain respectively 7, 13, and 6 questions.
- For Exercise A the maximum score for a completely correct answer is either 6 or 7 points.
- For Exercise B each question is worth a maximum of 2 points.
- For Exercise C each question may receive no more than 5 points.

The questions for Exercise B are multiple choice questions and are scored as either correct or incorrect. For Exercises A and C the student is asked to:

- Judge whether or not a statement is correct, and if incorrect to write a correct version of it (Exercise A).
- Judge whether or not definitional statements are correct, and if incorrect to write a correct definition (Exercise B).

For such questions there is no one specific answer. Rather, there is a correct definition or concept which may be described in a number of ways. Therefore, when grading such questions the answer may be judged as partially correct. Judge whether the question is:

- Completely correct—award the maximum point score.
- 75% correct—award 75% of the maximum point score.
- 50% correct—award 50% of the maximum point score.
- 25% correct—award 25% of the maximum point score.
- Completely incorrect—award no point score.

In Section VI the procedures for scoring abstracting test questions were discussed. To review briefly: each abstract item is scored in terms of the maximum allowable raw score for that item. This information is contained in Table 10.

The sum of the maximum allowable raw scores is then obtained for the question. This sum can be obtained directly from Table 11 or it can be derived from information in Table 10.

The maximum grade score for the question is determined by consulting the appropriate Scoring Key. For example, for Instructional Package 4, Exercise D of the criterion test contains six abstracting questions. For three of these questions the maximum point value is 5; the fourth question (Chart #6) has a maximum point value of 13; the other two questions are worth a maximum of 12 points each.

For any particular abstracting question, the number of points awarded the student is determined by multiplying the obtained raw score by the ratio of the maximum point value to the maximum allowable raw score.

Table 13

**Scoring Key: Maximum Point Value for Each
Question of Each Criterion Test**

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-1	A	Situation 1	7
		2	6
		3	6
		4	6
		5	6
		6	7
		7	6 ... 44
	B	Question 1	2
		2	2
		3	2
		4	2
		5	2
		6	2
		7	2
		8	2
		9	2
		10	2
		11	2
		12	2
		13	2 ... 26
	C	Question 1	5
		2	5
		3	5
		4	5
		5	5
		6	5 ... 30
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-2	A	Question 1	3
		2	3
		3	3
		4	3
		5	3
		6	3 ... 18
	B	Question 1	3
		2	3
		3	3
		4	3
		5	3
		6	3
		7	3
		8	3
		9	3
		10	3 ... 30
	C	Question 1	3
		2	3
		3	3
		4	3
		5	3 ... 15
	D	Question 1	3
		2	3
		3	3
		4	3
		5	3
		6	8 ... 23
	E	Question 1	1.4
		2	1.4
		3	1.4
		4	1.4
		5	1.4
		6	1.4
		7	1.4
		8	1.4
		9	1.4
		10	1.4 ... 14
			100

(Continued)

Table 13 (Continued)

**Scoring Key: Maximum Point Value for Each
Question of Each Criterion Test**

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-3	A	Question 1	30
		2	... 30
	B	Chart 20-00-00	10
		Chart 70-00-00	10
		Chart #6	15
		Chart #19	15 ... 50
	C	Question 1 (12 parts)	12
		Question 2 (8 parts)	8 ... 20
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-4	A	Question 1	2
		2	2
		3	2
		4	2
		5	2 ... 10
	B	Question 1 (9 parts)	18 ... 18
	C	Question 1 (10 parts)	20 ... 20
	D	Chart 90-00-00	5
		Chart 70-00-00	5
		Chart Jane Doe #5	5
		Chart #5	13
		Chart #17	12
		Chart #19	12 ... 52
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-5	A	Dx Report 1	2
		2	2
		3	2
		4	2
		5	2
		6	2
		7	2
		8	4
		9	2 ... 20
	B	Situation 1	5
		2	5
		3	5
		4	5
		5	5 ... 25
	C	Chart #5	15
		Chart #7	15
		Chart #17	15
		Chart #19	10 ... 55
			100

(Continued)

Table 13 (Continued)

**Scoring Key: Maximum Point Value for Each
Question of Each Criterion Test**

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-6	A	Statement 1	5
		2	5
		3	5 ... 15
	B	Question 1 (10 parts)	10
		Question 2 (5 parts)	10 ... 20
	C	Chart #1	10
		Chart #31	5
		Chart #7	5
		Chart #17	5
		Chart 10-00-00	5
		Chart 80-00-00	5
		Chart Jane Doe #5	5
		Chart 20-00-00	5
		Chart 70-00-00	5
		Chart #6	15 ... 65
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-7	A	Chart #40	25
		Chart #22	25 ... 50
	B	Question 1	5
		2	5
		3	5
		4	5
		5	5
		6	5
	C	Question 7 (5 parts)	10
		Question 8 (10 parts)	10 ... 50
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-8	A	Question 1	5
		2	5
		3	5
		4	5 ... 20
	B	Question 1	5
		2	5
		3	5
		4	5 ... 20
	C	Question 1	3
		2	3
		3	3
		4	3
		5	3
		6	3 ... 18
	D	Chart #14	12
		Chart #4	30 ... 42
			100

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-9	A	Chart #1	10
		#5	10
		#6	20
		#13	10
		#22	10
		#32	10 ... 70
	B	Question 1	5
		2	5 ... 10
	C	Statement 1	4
		2	4
		3	4
		4	4
		5	4 ... 20
			100

(Continued)

Table 13 (Continued)

Scoring Key: Maximum Point Value for Each
Question of Each Criterion Test

Criterion Test	Exercise	Question Number	Maximum Point Value
IP-10	A	Chart #1	10
		Chart #5	
		(1st primary)	10
		Chart #5	
		(2nd primary)	10
		Chart #6	
		(1st primary)	10
		Chart #6	
		(2nd primary)	10
		Chart #6	
		(3rd primary)	10
		Chart #13	5
		Chart #22	15 ... 80
	B	Question 1	10
		Question 2	10 ... 20
		100	

Section VIII

RATIONALE FOR THE DESIGN AND UTILIZATION OF TUMOR REGISTRY ABSTRACT FORMS

DEVELOPMENT OF STANDARD FORMS AND FORMATS

Existing registries and registry systems use commercially available abstract forms, or they design their own. Most of these forms are quite similar in that they provide space for recording certain basic items of information. However, the forms vary widely with respect to the optional items of information listed and the amount of detailed information asked for as well as the degree to which the abstract format is structured.

Most individual tumor registries use forms which, to some extent, are incompatible with those used at other registries. There is, therefore, a need for standardizing the forms used by registries. Yet there also is a need for providing each registry with a means of collecting the items of information of special interest to the users of that particular registry. In an effort to develop a system for meeting these two somewhat conflicting requirements, we have developed with this training program three tumor registry abstract forms:

- Tumor Registry Abstract Form, detailed version (see Appendix B).
- Tumor Registry Abstract Form, summary version.
- Patient Follow-Through Form (attached to detailed abstract form).

These three forms, especially the detailed versions, are composed of material borrowed or adapted from abstract forms now used by the Rocky Mountain States Cooperative Tumor Registry, the California Tumor Registry, the Connecticut Tumor Registry, and the Georgia Tumor Registry System. The detailed abstract forms provide places to record many items of information that are optional at local and central registries. In the material immediately following we hope to provide you with (a) an understanding of the rationale for developing the three abstracts, and (b) guidance on how you can modify these abstracts to fit the needs of your own registry or registry system.

THE PURPOSES AND CHARACTERISTICS OF ABSTRACT FORMS: ALTERNATE VIEWPOINTS

Differences of opinion exist regarding what items of information should be recorded on a tumor registry abstract form, how highly structured the form should be, and how much directional information should be contained in the form itself. To understand and use the abstract forms developed for this instructional program, it is appropriate to briefly consider some of the issues and alternatives:

(1) An agreement has been reached regarding the basic "core items" of information that would be recorded on an abstract. Should an abstract also attempt to cover a variety of optional items which may not be of interest to many registries?

(2) Abstracts are used for many purposes. They sometimes serve as a basic source of data, thus lessening the necessity for referring back to the medical chart.

Detailed medical charts are difficult and time-consuming to prepare. Therefore, should an abstract be detailed enough to serve in lieu of a chart?

(3) An abstract form can be relatively unstructured like the summary abstract used with this course of instruction, or it can be highly structured, such as the detailed abstract used in this course. The detailed structure is often in the nature of directional material and/or checklists which serve as mnemonic devices. This material is very useful, but where should it be located—on the abstract itself (making it bulky and formidable looking), or in a handbook of directional procedures (meaning that the abstractor will formulate her own directions and checklists)?

(4) There are certain items of information that might be useful to record on an abstract; however, it may be that this information often is not contained in the medical chart. Should one ask for those items of information that are often not available? One point of view is that it is useless to attempt to collect such information, because complete summaries cannot be prepared for large numbers of patients. Technically this is correct. A second point of view is that by requesting certain items of information, the stage has been set for asking all physicians to record that information on each medical chart. Eventually this should improve the quality of information obtainable from a chart.

DEVELOPMENT OF A MODULARIZED DETAILED ABSTRACT FORM

An abstract must be designed in accordance with the wishes of its users. This instructional program and its abstracts are designed for use by a large potential audience—by some 2,000 hospital registries affiliated with regional medical programs or candidates for affiliation once they establish a tumor registry. To a lesser extent, the program, it is hoped, will assist those registries currently affiliated with the National Cancer Institute, End Result Section program.

It is not possible to design an abstract form completely satisfactory to all potential users. So we have attempted to develop a modularized detailed abstract, one which covers *all core items* of information and, in addition, provides a structure for collecting many optional items of information. This detailed abstract was designed in accordance with certain principles:

(1) To fit the needs of a large population of users, an abstract should be designed to collect information on *all core items* plus a wide variety of optional topics. Therefore, the detailed version of the tumor registry abstract form is composed of core and optional items (see Table 14).

(2) When the working condition allows for it, it is very useful to provide a detailed structure for an abstract to include checklists of the items of information which might be recorded on the abstract. Therefore, the detailed abstract forms contain checklists of items of information that should be searched for in the medical chart. An abstract form with such checklists serves as a memory aid and tends to increase the reliability of the abstracted information. The "Manual for Abstracting the Medical Chart of Cancer Patients," prepared for this course, contains all of the instructional material and checklists found on the detailed abstract. The use of this Manual is taught in the instructional packages prepared for this course.

(3) Each item on the abstract has been arranged so that, whenever possible, the presence of certain information items on the medical chart can be noted on the abstract by a number which corresponds to that item of information. For example, by Item 18b, General Symptoms, has nine blocks for recording information. The presence of fever as a general symptom would be noted by recording the number 12 in one of the blocks

provided for Item 18b. Recording information in this manner is of great assistance to those who eventually must code and/or keypunch this information.

UTILIZATION OF A MODULARIZED ABSTRACT FORM

To use this form most efficiently, each registry or registry system should first identify those items of information that will be recorded on the abstract. Undoubtedly, each registry and registry system will not record all the information on certain areas covered by this abstract. For example, Item 36 of this abstract covers the detailed findings of laboratory studies. As another example, Items 42, 43, 44, 45, and 47 collect detailed information on laboratory findings and on treatments. Some registries do not now collect this type of information in great detail, or may not collect it at all. Eliminating all of these items would reduce the length of the abstract by several pages.

Each registry and registry system must decide what optional items of information will be recorded on their abstracts—that is, they should print their own version of each abstract, especially their version of the detailed abstract. The detailed abstract should contain all core items, and it is strongly recommended that the format for each core item be the format employed on the abstracts developed for this training program. Adopting this recommendation would help considerably in the efforts to standardize the forms used at individual hospitals. Without such standardization it is difficult to combine data from different registries.

A summary version of the detailed abstract has been provided for registries that feel they must use a condensed form of an abstract. When this is the case, it is strongly urged that the detailed version of the abstract form be used to collect information from the medical chart. This detailed abstract form would be used as a work sheet. Then, the final step in abstracting would be to transfer appropriate information from the detailed form to the summary form. A copy of the detailed form then could be sent on to a central registry, filed in the local registry, or both. The summary abstract should be placed in the local registry file, and in its corresponding medical chart.

A tumor registry abstract can provide the physician with a very convenient summary of the previous diagnosis and treatment of a cancer patient. Therefore, after an abstract is prepared, a copy should be placed in the medical chart. Then if the patient is re-admitted, information about previous admission for cancer will be readily available.

In the establishment of a tumor registry, numerous detailed policies must be established. Many of these policies may seem quite arbitrary. For example, some registries exclude cases diagnosed at their hospital but treated elsewhere. This is a necessary type of decision in order to establish agreement on the types of cases that will be included in the registry. These policies and agreements may be established by a central registry, by the tumor committee at your hospital, by the registry supervisor, or by other interested persons. The point is that these policies and agreements need to be established.

All registry activities should be performed in accordance with the following rules:

- Whatever you do, record the related rules, policies, and agreements as specifically as possible.
- Whatever you do, first obtain the concurrence of the registry supervisor.
- Whatever you do, do it consistently.

ITEMS OF INFORMATION FOR CANCER REGISTRIES

On 5 August 1968, representatives of the American College of Surgeons, American Cancer Society, Regional Medical Program, End Results Group, and many other medical

groups met at the National Institute of Health, Bethesda, Maryland. At this meeting a regional medical program position paper on registries was presented which proposed the establishment of service-oriented Tumor Registries throughout the nation.

Included in this proposal was a tentative list of information items which should be collected by each registry for each cancer record. These items of information are similar to those now collected by registries which feed their data into the End Results Program of the National Cancer Institute. At the 5 August 1968 meeting the proposed list of information items was accepted in principle. Since that time no appreciable changes have been made to this list.

Table 14 contains the list of "core" and "optional" items of information for cancer registries.

The last table in this Section, Table 15, contains a list of the core items of information which should be recorded on a tumor registry abstract form. For some items a brief explanation is provided regarding the nature of the information to record. The important feature of this table is that it related the core items to the items contained on the detailed abstract used in this program. As illustrations:

- Item #1 of the detailed abstract is used to record "Name & Telephone No." of the patient.
- Item #9 is used to record the Sex, Date of Birth, Race and Marital status of the patient.
- Item #27 is used to record the final diagnosis for the patient.
- Item #42 is used to record the use of surgical treatment for the patient. The minimum requirement is to record whether or not surgery was performed, and the date it was performed.
- Item #49 is used to record follow-through information. The minimum requirement can be met by recording current quality of survival; present status, this cancer; source of follow-through information; and survival time in years and months.

Table 14

ITEMS OF INFORMATION FOR CANCER REGISTRIES^a

* Optional at local and central
 ** Optional at central registry

-
- A. Identification:
1. Hospital
 - a. Name (in abbreviated form or Code number (At central registry, name will be converted to a code number
 - ** b. Location
 2. Patient
 - a. Name—surname, first, middle
 - * Mrs. (when applicable)
 - b. Chart number
 - * c. Hospital registry accession number
 - d. Central registry accession number
 - * e. Social security number
 - f. Address—street, city, (county), state
 - ** g. Phone number
 - ** h. Relative or other contact
 - 1) relationship
 - 2) name, address, phone
 - * i. Employer—name, address, phone
- B. Demographic Information:
1. Race
 2. Sex
 3. Date of birth—month, day, year
 4. Marital status—single, married, widowed, divorced, or separated
 - * 5. Occupation—nature of job and industry
 - * 6. Country of birth—patient, mother, father
- C. History:
- * 1. Prior cancer (other than epidermoid skin cancer)—no, yes
 If yes: diagnosis, date, treatment
 2. Prior diagnosis of this cancer—no, yes
 If yes:
 - a. Name of hospital or physician
 - b. Diagnosis (site and type) and date
 - * c. Method of diagnosis—histology, hematology, cytology, X-ray, clinical only, other (specify)
 - d. Was treatment given for this neoplasm—no, yes
 If yes: Type of treatment and date(s)
 - * 3. Delay—dates of:
 - a. First symptoms
 - b. First sought medical advice
 - c. First diagnosis
 - d. Initiation of treatment
 4. Date admitted to this hospital
 - * 5. Date of discharge (first)
-

(Continued)

Table 14 (Continued)

ITEMS OF INFORMATION FOR CANCER REGISTRIES^a

-
- D. Diagnosis (final)
1. Primary site—minimum detail as per ICD
 2. Histologic type—detail as per Manual of Tumor Nomenclature, 1968 revision
 - * 3. Sequence number
 - * 4. Histopathologic diagnosis
 - a. Descriptive diagnosis
 - b. Date
 - c. Hospital (or laboratory)
 - d. Slide numbers
 5. Extent of disease—assessment of extent of disease at initiation of treatment based on all information available during first course of treatment
 - a. Summary classification—
 - Localized
 - Regional node involvement
 - Direct extension to adjacent tissues
 - Regional nodes plus adjacent tissues
 - Distant or diffuse spread

Note: A more detailed descriptive scheme may be used, provided it is compatible with the summary classification
 - b. Detailed description in text form or via a check list
 - * 6. Clinical assessment of extent of disease
 - a. Summary classification per American Joint Committee
 - b. Detailed description in text form or via a check list
- E. Treatment:
1. First course—in the absence of specific information regarding the planned course of treatment, include all tumor-directed treatment initiated within 4 months of diagnosis. Indicate date of initiation of each type of treatment, i.e., surgery, beam radiation, other radiation, chemotherapy, hormone therapy, endocrine surgery, endocrine radiation.
 - * 2. Supportive therapy—only treatment given; or preceding first tumor-directed treatment
 3. Subsequent treatment—record as per first course of treatment, but for coding purposes it is sufficient to combine all subsequent treatment to identify types given
 - * 4. Description of treatments given—including detailed description of extent of surgery; radiation fields and dosage; specific chemotherapeutic agents, route, and dosage; etc.
- F. Follow-up:
1. Date of contact (or death)
 - ** 2. Source of information
 3. Vital status—alive or dead
 - * 4. Disease status at last contact or death
 - No evidence of cancer
 - In remission
 - Evidence of cancer
 - Residual (never free)
 - Recurrent
 - Cancer present, but origin not known
 - Unknown
-

(Continued)

Table 14 (Continued)

ITEMS OF INFORMATION FOR CANCER REGISTRIES^a

-
- * 5. Performance status—at each hospital discharge; at each contact
 - Normal activity
 - Asymptomatic
 - Symptomatic
 - Unable to work
 - Capable of selfcare
 - Not capable of selfcare
 - Severely disabled
 - Not terminal
 - Terminal
 - Dead
 - 6. Cause of death
 - a. Per death certificate
 - * b. Per best available information; indicate source
 - 7. Survival time—years and months
 - ** 8. Physician (or clinic) responsible for patient follow-up
 - * 9. Other interested physician
-

^aFrom *The Cancer Registry* by Abraham Ringel, Regional Medical Programs Service, Health Services and Mental Health Administration, U.S. Department of Health, Education, and Welfare, 1970.

Table 15

ITEMS OF INFORMATION FOR CANCER REGISTRIES: MINIMUM REQUIREMENTS

Abstract Identification Information:

Hospital/Clinic name
Admission Date
Hospital Chart No.
Central Registry No.

Patient Identification

- (1) Name & Telephone No. of patient
- (2) Address
- (4) Nearest Friend or Relative
- (8) Follow-up Through
- (9) Sex
 - Date of Birth
 - Race
 - Marital Status
- (15) Was neoplasm diagnosed before this admission?
 - Yes — No
 - If Yes, name of hospital/physician & diagnosis & date
- (17) Previous treatment, this neoplasm
 - Yes — No
 - If Yes, brief description
- (27) Final Diagnosis
 - a. Primary site
 - b. Histologic type
 - d. Extent of disease
- (31a) Extent of Disease (same as 27d)
- (34) Extent of Disease (same as 27d)
- (42) Surgical Procedure
 - Yes — No; indicate date(s)
- (43) Radiotherapy (Beam)
 - Yes — No; indicate date(s)
- (44) Radiotherapy (Sealed Source & Systemic)
 - Yes — No; indicate date(s)
- (45) Chemotherapy and/or Endocrine Therapy
 - Yes — No; indicate date(s)
- (46) Other Cancer-Directed Therapy
 - Yes — No; indicate date(s)
- (47) Subsequent Treatment
 - Yes — No
 - If Yes, record type and date(s)
- (48) Death Information
 - Date of Death
 - Survival time, years and months
 - Findings
- (49) Follow-Through Record
 - II Current Quality of Survival
 - IV Present status, this cancer
 - XI Sources of follow-through information
 - XIII Survival time, year and month

APPENDICES

Appendix A

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OF THE
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MEDICAL VOCABULARY AND
MEDICAL CHART ABSTRACTING FOR
TUMOR REGISTRARS
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TUMOR REGISTRAR HANDBOOK**

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III PRACTICAL EXERCISE MATERIAL

Charity Hospital, New Orleans,
Charts 1 and 31 (under separate cover)

IV TUMOR REGISTRAR HANDBOOK

Rationale for the Design and Utilization of
Tumor Registry Abstract Forms 87
Notebook and Divider Pages (under separate cover)

V CRITERION TEST 91

VI REFERENCE MATERIAL AND OUTSIDE READINGS 100

The Hospital Cancer Registry: Definitions,
Purposes, Values, Operations, and Cost.
American Cancer Society, 1966. (enclosed)

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1968 Edition (Red Book), the American
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V CRITERION TEST

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Section D--A Selected List of Tumor Registry Job Aids and References	

V CRITERION TEST

VI REFERENCE MATERIAL AND OUTSIDE READINGS

Reference #1--The Hospital Cancer Registry--
Definition, Purpose, Value, Operations,
and Cost

Reference #2--Guidelines for Cancer Care

Reference #3--Manual for Cancer Programs

Reference #4--Establishment of a Tumor Registry
System for Louisiana: Proposals on Objectives,
Capabilities, and Structure.

Reference #5--The Cancer Registry

TUMOR REGISTRAR HANDBOOK

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Section

- A Manual of Procedures for Abstracting the Medical Chart of a Cancer Patient
- B Abstract and Patient Follow-Through Forms for Tumor Registries
- C Rationale for the Design and Utilization of Tumor Registry Abstract Forms
- D Lists of Reportable Neoplasms and Nonreportable (Benign) Neoplasms, and Classification of Some Common Neoplasms
- E Sources of Information in a Medical Chart
- F Categories and Techniques of Diagnosis
- G Categories of Treatment
- H Cancer Treatment: Lists of Terms
- I S.N.O.P. Histology Code
- J Primary Site Classification: Major Divisions and Subdivisions (Including SNDO and ICD Codes)
- K Classification of Extent of Disease
- L A Selected List of Tumor Registry Job Aids and References

Appendix B **TUMOR REGISTRY ABSTRACT** (Detailed Version)

Hospital/Clinic _____	Patient Classification	Hospital Chart No. _____
Admission Date _____	☐ 1. Inpatient	Local Registry No. _____
Discharge Date _____	☐ 2. Outpatient	Central Registry No. _____
Abstract Date _____	☐ 3. Private	Social Security No. _____
Abstracted by _____	☐ 4. Staff	
	☐ 5. Other	

27. FINAL DIAGNOSIS: SUMMARY

a. _____
Primary Site (Origin) of Tumor

b. _____
Histological Type as Stated by Pathologist

c. _____
Differentiation or Grade as Stated by Pathologist

d. _____
Extent of Disease

e. Paired Organ Yes ☐ Right ☐
 No ☐ Left ☐

SECTION I - PATIENT IDENTIFICATION

1. Name _____ Telephone _____
 Last First Middle/Maiden

2. Address _____
(Permanent) City/Town House &/or Apt. No. Street Name or No. County State Zipcode

3. Spouse _____
 Name Address Telephone

4. Nearest Friend _____
or Relative Name Relationship Address Telephone

5. Referral Clinic _____
or Hospital Name Address Telephone

6. Physicians:

a. Family _____
 Name Address Telephone

b. Referral _____
 Name Address Telephone

c. Staff: This Hospital _____
 Name & Dept. Telephone

7. Employer _____
 Name Address Telephone

8. Follow-up through:
(Dr., Hospital, or Clinic) _____
 Name Address/Hospital Dept. Telephone

SECTION II - BIOGRAPHICAL, SOCIAL AND MEDICAL HISTORY

9. Biographical Information

a. _____ Sex (male, female, unk.)

b. _____ Age at Dx, last birthday

c. _____ Date of birth

d. _____ Place of birth (Town,
County & State)

e. Race

- ☐ 1. Caucasian 5. Chinese
2. Negro 6. Japanese
3. Amer. Indian 7. Other (specify)
4. Spanish Amer. _____

f. Marital Status

- ☐ 1. Single 4. Divorced
2. Married 5. Separated
3. Widow 6. Unknown

10. Occupational History

a. _____ Major Occupation

b. _____ Secondary Occupation

c. Present Work Status

- ☐ 1. Working normally 4. Disabled
2. Semi-retired 5. Does not apply
3. Retired 6. Unknown

11. Social History

C = Current, P = Previous

No. C/P

1. Alcoholism
2. Birth control pills
3. Exposure: industrial toxins
industrial carcinogens
4. Smoking: a. Cigar c. Pipe
b. Cigarette d. Cannabis
5. Previous anticancer drugs
6. Trauma in area of primary tumor
7. Other _____
8. Unknown

Describe: _____

12. Family History of Cancer:

a. Relative:

1. Mother
2. Father
3. Sibling
4. Child
5. Maternal grandparent
6. Paternal grandparent
7. Other (specify) _____

8. None
9. Unknown

b. Site(s) of family cancer:

- a. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
- b. ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
1. Breast
 2. Gastrointestina
 3. Lung
 4. Genitourinary
 5. Lymphoma
 6. Leukemia
 7. Other (specify) _____
 8. Unknown

13. Female History

a. Patient is:

- ☐ 1. Pregnant 2. Premenopausal 3. Perimenopausal 4. (Menopause $\pm$ 1 yr.) 5. Menopausal, 1-5 yrs. 6. Menopausal, more than 5 yrs. 7. Not Applicable
- b. No. of Pregnancies
- c. No. of Births
- 0 (None) 5
1 6 or more
2 7 (Unknown)
3
4

14. Referral Source

- ☐ 1. Private Physician 5. Statutory authority
2. Hospital or Clinic (outside) 6. Self
3. Hospital or Clinic (this institution) 7. Other
4. Nursing Home 8. Unknown

If 1, 2, 4, or 5 above, please specify:

Name of physician or institution _____

Address _____

15. Was this neoplasm diagnosed before this admission?

- ☐ 1. Yes, this institution 3. No
2. Yes, elsewhere 4. Unknown
If "yes, elsewhere" specify name & address of physician
and/or institution _____

Name of hospital or physician (or unk) _____

Diagnosis (site and type) and date _____

Method of diagnosis (use No. 24 categories) _____

If treatment received, note in item 17

16. Previous Neoplasms

a. Record total number of previous occurrences, this neoplasm:

- ☐ 0 4
1 5
2 6 or more
3 7 (unknown)

b. Record total number of previous independent cancers:

- ☐ 0 4
1 5
2 6 or more
3 7 (unknown)

c. Record primary site and type for each previous independent cancer. If unknown, record as unk.

(1) _____

(2) _____

SECTION II - BIOGRAPHICAL, SOCIAL AND MEDICAL HISTORY (Continued)

17. Previous Treatment

a. Has patient received tumor-directed treatment for this neoplasm more than 3 months before entry to this institution?

☐

1. Yes

2. No

1. Surgery

3. Chemotherapy

5. Other

b. If yes, check types given and describe briefly

2. Radiotherapy

4. Hormones/Steroids

6. Unknown

☐
☐
☐

*NOTE: Any treatment given within three (3) months before entry should be indicated on an appropriate treatment summary in Section IV.

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS

18. Symptoms

18a. Significant Symptoms. Describe and record date of onset for those symptoms which have occurred within one year prior to admission (PTA).

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☐
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Checklist:

1. Changes in bowel or bladder habits.
2. A sore that does not heal.
3. Unusual bleeding or discharge (presence or absence of).
4. A lump or thickening-breast, elsewhere.
5. Indigestion or difficulty swallowing.
6. Obvious changes in a wart or mole.
7. Persistent hoarseness, cough, sore throat.
8. Weakness or fatigue, fainting spells.
9. Unexplained weight loss or gain.
10. Breathing difficulties, shortness of breath.
11. Other symptoms (define).
12. No significant symptoms.
13. Information unavailable.

18b. General Symptoms. Describe and record date of onset for those symptoms which originated within three (3) months PTA.

☐
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☐
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Checklist:

- | | |
|----------------------|--------------------------|
| 1. None | 22. Nausea &/or vomiting |
| 2. Angina pectoris | 23. Night Sweats |
| 3. Acromegaly | 24. Nocturia |
| 4. Anorexia | 25. Orthopnea |
| 5. Chills | 26. Pain |
| 6. Cough | 27. Pruritus (itching) |
| 7. Diarrhea | 28. Petechia |
| 8. Dysphagia | 29. Skin nodules |
| 9. Dyspnea | 30. Sore throat |
| 10. Dysuria | 31. Syncope |
| 11. Endocrine effect | 32. Urinary frequency |
| 12. Fever | 33. Urinary irritation |
| 13. Headache | 34. Urinary obstruction |
| 14. Hematuria | 35. Urinary urgency |
| 15. Hematemesis | 36. Vaginal bleeding |
| 16. Hemoptysis | 37. Weakness, fatigue |
| 17. Hemorrhage | 38. Weight gain |
| 18. Hirsutism | 39. Weight loss |
| 19. Hoarseness | 40. Other (specify) |
| 20. Lactation | 41. Unknown |
| 21. Melena | |

18c. Neurological Symptoms: Describe and record date of onset for those symptoms which originated one year PTA.

☐
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Checklist:

1. No neurologic symptoms
2. Abnormal coordination
3. Abnormal gait
4. Memory deficit
5. Motor weakness
6. Seizures
7. Sensory change
8. Abnormal speech
9. Visual defect
10. Other (specify)
11. Unknown

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS (Continued)

19. Physical Findings:

☐	☐	_____
☐	☐	_____
☐	☐	_____
☐	☐	_____
☐	☐	_____

Checklist:

- | | | |
|----------------------------------|-------------------------------|------------------------------------|
| 1. No positive physical findings | 10. Hepatomegaly | 19. Splenomegaly |
| 2. Anemia, progressive | 11. Jaundice | 20. Tonsil enlargement |
| 3. Ascites | 12. Lymphadenopathy | 21. Venous/arterial obstruction |
| 4. Blood changes | 13. Mass or lump | 22. Other (specify) _____ |
| 5. Cachexia | 14. Obesity | 23. Weight of patient _____ lbs. |
| 6. Cardiomegaly | 15. Pallor | 24. Height of patient _____ inches |
| 7. Cranial nerve paralysis | 16. Paralysis of brain origin | 25. Blood type: _____ RH _____ |
| 8. Dermatitis | 17. Pleural effusion | |
| 9. Edema | 18. Spinal cord paralysis | |

20. Illnesses: Describe and record date of onset for those which originated within one year prior to admission.

☐	☐	_____
☐	☐	_____
☐	☐	_____
☐	☐	_____
☐	☐	_____

Checklist:

- | | | | |
|-------------------------------|-----------------------------|---------------------------------|-------------------------------|
| 1. No concurrent illness | 10. Gonorrhea | 18. Neuritis | 27. Thyroid disease |
| 2. Allergy | 11. Hypertension | 19. Neurologic disorder | 28. Traumatic fracture |
| 3. Bronchiectasis | 12. Infection at tumor site | 20. Pelvic infection | 29. Tuberculosis |
| 4. Burns in primary site area | 13. Leukoplakia | 21. Peripheral vascular disease | 30. Ulcerative colitis |
| 5. Cirrhosis | 14. Mental illness | 22. Pernicious anemia | 31. Villous adenomas of colon |
| 6. C.V.A. | 15. Myasthenia gravis | 23. Pneumonia | 32. Unknown |
| 7. Cystic mastitis | 16. Myocardial infarct | 24. Polyposis of GI tract | 33. Other _____ |
| 8. Diabetes Mellitus | 17. Nephritis | 25. Skin disease | |
| 9. Emphysema | | 26. Syphilis | |

21. Current Medications

☐	☐	_____
☐	☐	_____
☐	☐	_____
☐	☐	_____

(P) Prescribed (A) Addiction (Unk) Unknown

Checklist

- | | |
|---------------------------|-----------------|
| 1. Antibiotics | 7. Narcotic(s) |
| 2. Barbiturates | 8. Stimulants |
| 3. Birth Control Hormones | 9. Tranquilizer |
| 4. Digitalis | 10. Other _____ |
| 5. Diuretic | 11. _____ |
| 6. Estrogen | |

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS (Continued)

22. Reports of Diagnostic Findings. (Record report findings for each of the diagnostic methods listed in item 24. Include also Surgery Report and Post-Operative Pathology Report.)

a. _____
report title _____

b. _____
report title _____

c. _____
report title _____

d. _____
report title _____

e. _____
Statement of Examining Physician (this hospital) _____

f. _____
Statement of Examining Physician, prior to this admission (see item 15) _____

23. Temporal history, this tumor

	Month	Year	Lag in Months
a. Date of onset of symptoms	_____	_____	_____
b. Date of initial visit to physician	_____	_____	_____
c. Date of initial diagnosis	_____	_____	_____
d. Date of initial definitive treatment	_____	_____	_____

24. Diagnostic Methods (Include all methods used in making final diagnosis)

☐ 1. Histopathology (NOS)	☐ 3. Hematology	☐ 5. Clinical Observation (NOS)	☐ 7. Hormonal or Enzymatic studies
☐ a. Primary site tissue	☐ 4. X-ray studies	☐ a. Endoscopic studies	☐ 8. Unknown
☐ b. Metastatic site tissue	☐ 5. Radioisotope studies/ diagnostic nuclear med.	☐ b. Palpation/ext. observation	☐ 9. Other: _____
☐ c. Autopsy tissue		☐ c. Gross surgical specimen	_____
☐ 2. Cytopathology		☐ d. Exploratory surgery	_____
		☐ e. Autopsy	_____

25. Place of Microscopic Confirmation: (Check all)

☐ 1. None	☐ 4. Place of diagnosis (as stated in 15)
☐ 2. This institution	☐ 5. Other _____
☐ 3. This institution review of slides	

26. ☐ How was cancer discovered? 1. Self Referral 2. Screening 3. Routine Physical 4. Other _____

27. Final Diagnosis. Record on first page.

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS (Continued)

EXTENT OF DISEASE INFORMATION

For Hodgkin's Disease, Leukemia, Lymphosarcoma, Reticulum Cell Sarcoma, Multiple Myeloma and other Lymphomas, complete items 33 through 35 instead of items 28 through 32

28. Description of Primary Tumor

a. Clinical Reports

- ☐ 1. Primary tumor confined to site of origin
- ☐ 2. Primary tumor extended beyond site of origin to invade adjacent organ or site
- ☐ 3. Primary tumor invaded local nerve(s)
- ☐ 4. Primary tumor invaded local vessel(s)
- ☐ 5. Primary tumor invaded local bone(s)
- ☐ 6. Primary tumor invaded local skin
- ☐ 7. Information not available
- ☐ 8. Primary site unknown, metastasis has occurred

Clinical size of primary tumor in Cm. _____

b. Pathology Findings

- ☐ 1. Primary tumor confined to site of origin
- ☐ 2. Primary tumor extended beyond site of origin to invade adjacent organ(s) or site(s)
- ☐ 3. Primary tumor invaded local nerve(s)
- ☐ 4. Primary tumor invaded local vessel(s)
- ☐ 5. Primary tumor invaded local bone(s)
- ☐ 6. Primary tumor invaded local skin
- ☐ 7. No tumor in specimen
- ☐ 8. No specimen
- ☐ 9. Information not available

Pathology, size of primary tumor in Cm. _____

29. Description of Regional Node Metastasis

a. Clinical Reports

- ☐ 1. No palpable regional lymph node(s)
- ☐ 2. Palpable node(s) but metastasis not suspected
- ☐ 3. Palpable homolateral regional lymph node(s) that are not fixed, metastasis suspected
- ☐ 4. Palpable contralateral or bilateral regional node(s) that are not fixed, metastasis suspected
- ☐ 5. Nodes not available for palpation
- ☐ 6. Information not available
- ☐ 7. Other _____

b. Pathology Findings

- ☐ 1. Lymph nodes in spec. free of cancer
- ☐ 2. Lymph nodes contain cancer but not thru capsule of nodes (not fixed)
- ☐ 3. Cancer in lymph nodes extends into surrounding soft tissue (fixed)
- ☐ 4. No nodes in specimen
- ☐ 5. No specimen
- ☐ 6. Information not available
- ☐ 7. Other _____

30. Description of Distant Metastasis

a. Clinical Reports

- ☐ 1. Evidence of metastasis other than to regional lymph nodes
- ☐ 2. Information not available
- ☐ 3. No evidence of distant metastasis

b. Pathology Findings

- ☐ 1. Evidence of metastasis other than to regional lymph nodes
- ☐ 2. No pathology specimen
- ☐ 3. No evidence of distant metastasis

31a. Extent of Disease (Stage)

- ☐ 1. Carcinoma in situ (must be on path. report)
- ☐ 2. Localized to primary site
- ☐ 3. Regional: direct extension, no node involvement
- ☐ 4. Regional: direct extension, regional node involvement
- ☐ 5. Regional: no extension, regional node involvement
- ☐ 6. Regional: not otherwise specified
- ☐ 7. Not localized, unknown if regional or remote
- ☐ 8. Remote or disseminated
- ☐ 9. Unknown

31b. Clinical stage for carcinoma, sarcoma, and lymphoma limited to visceral organs. For those using the T N M system, consult the specific fascicle for this site and record appropriately (T₀ - in situ, no tumor clinically)

Tumor	Nodes	Metastasis	Stage
0. in situ	0. 0	0. 0	0. 0
1. one	1. one	1. 1	1. I
2. two	2. two		2. II
3. three	3. three		3. III
4. four	4. X		4. IV
☐ T	☐ N	☐ M	☐

32. Bases of Assessment of Extent of Disease

- ☐ 1. Histopathology
- ☐ 2. Surgical exploration
- ☐ 3. X-ray studies
- ☐ 4. Autopsy

- 5. Other (specify) _____

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS (Continued)

Diagnostic and Extent of Disease Information for Hodgkin's Disease, Leukemia, Lymphosarcoma, Reticulum Cell Sarcoma, Multiple Myeloma and other Lymphomas

33. Clinical Findings for Hodgkins, Leukemia, Lymphosarcoma, Reticulum Cell Sarcoma, Multiple Myeloma and other Lymphomas: specify

a. Patient has systemic manifestations Description: _____
☐ 1. Yes 2. No 3. Unknown

b. Patient has bone marrow involvement Description: _____
☐ 1. Yes 2. No 3. Unknown

c. Patient has peripheral blood changes
☐ 1. Yes 2. No 3. Unknown
☐ Others _____

☐ 1. Anemia 4. Thrombocytopenia
☐ 2. Leukopenia 5. Leukocytosis
☐ 3. Polycythemia 6. Malignant Cells in Blood

NOTE: When completing this item refer to Items 18 through 20 for evidence of systemic manifestations—fever, pruritis, and night sweats.

Extent of Disease for Lymphomas

For Hodgkin's Disease, Reticulum Cell Sarcoma, and Lymphosarcoma. If the tumor is limited to nonlymphoid organs (stomach, lung, G.I. tract, etc.), stage as a carcinoma—Item 31a.

Leukemia, Myeloma, Mycosis Fungoides, Polycythemia Vera and Lymphomas not listed above are not to be staged.

34. Extent of Disease for Hodgkin's Disease, Lymphosarcoma, and Reticulum Cell Sarcoma "ONLY"

☐ 1. Stage 1A - Disease limited to the lymph nodes of one anatomic region (subgroup 1) or to two contiguous anatomic regions (subgroup 2) on the same side of diaphragm.
2. Stage 1B - Same as 1A - plus Systemic Manifestations: fever, night sweats, and/or pruritus.
3. Stage 2A - Disease in more than two contiguous or in two noncontiguous regions on the same side of the diaphragm.
4. Stage 2B - Same as 2A - plus fever, night sweats, and/or pruritus.
5. Stage 3A - Disease on both sides of the diaphragm, but not extending beyond the involvement of lymph nodes, spleen or Waldeyer's ring.
6. Stage 3B - Same as 3A - plus fever, night sweats, and/or pruritus.
7. Stage 4A - Involvement of the bone marrow, lung parenchyma, pleura, liver, bone, kidneys, gastrointestinal tract or any tissue or organ in addition to lymph nodes, spleen and Waldeyer's ring.
8. Stage 4B - Same as 4A - plus fever, night sweats, and/or pruritus.
9. Stage Unknown

35. Basis for Assessment of Extent of Disease

☐ 1. Lymphangiogram 3. Venogram 5. Was not determined
2. Clinical Findings only (Palpation, etc.) 4. Other - Describe _____ 6. Unknown

SECTION III - MEDICAL INFORMATION, DIAGNOSIS AND PHYSICAL FINDINGS (Continued)

36. Detailed Findings: Lab Studies

Laboratory Findings:

↓ N = Below Normal
N = Normal
↑ N = Above Normal

	RESULT (Record result & unit of measure)	CONCLUSION		
		↓ N	N	↑ N
a. Hematology				
1. None performed	_____	☐	☐	☐
2. RBC	_____	☐	☐	☐
3. WBC	_____	☐	☐	☐
4. Hematocrit	_____	☐	☐	☐
5. Hemoglobin	_____	☐	☐	☐
6. Platelet	_____	☐	☐	☐
7. Other (specify) _____	_____	☐	☐	☐
b. Liver Function				
1. None performed	_____	☐	☐	☐
2. BSP	_____	☐	☐	☐
3. Alk. Phosphatase	_____	☐	☐	☐
4. LDH	_____	☐	☐	☐
5. SGOT	_____	☐	☐	☐
6. Total protein	_____	☐	☐	☐
7. AG ratio	_____	☐	☐	☐
8. Other (specify) _____	_____	☐	☐	☐
c. Urinalysis				
1. None performed	_____	☐	☐	☐
2. Protein	_____	☐	☐	☐
3. RBC	_____	☐	☐	☐
4. WBC	_____	☐	☐	☐
5. Other (specify) _____	_____	☐	☐	☐
d. Other				
1. None performed	_____	☐	☐	☐
2. BUN	_____	☐	☐	☐
3. Creatinine	_____	☐	☐	☐
4. Acid phosphatase	_____	☐	☐	☐
5. Glucose	_____	☐	☐	☐
6. Serology	_____	☐	☐	☐
7. Uric Acid	_____	☐	☐	☐
8. Calcium	_____	☐	☐	☐
9. Electrophoresis (protein)	_____	☐	☐	☐
10. Other (specify) _____	_____	☐	☐	☐

37. Detailed Findings: X-ray Studies

N = Normal
A = Abnormal, not due to tumor
D = Definite tumor involvement

	N	A	D
a. X-Ray Studies			
1. None performed	☐	☐	☐
2. Skull or sinus	☐	☐	☐
3. KUB, IVP	☐	☐	☐
4. Lymphangiogram	☐	☐	☐
5. Arteriogram	☐	☐	☐
6. Pneumoencephalogram	☐	☐	☐
7. Esophagram	☐	☐	☐
8. GI series	☐	☐	☐
9. Barium Enema	☐	☐	☐
10. Bone	☐	☐	☐
11. Other (specify) _____	☐	☐	☐
b. Radiotope Studies			
1. None performed	☐	☐	☐
2. Brain	☐	☐	☐
3. Lung	☐	☐	☐
4. Bone	☐	☐	☐
5. Marrow	☐	☐	☐
6. Liver	☐	☐	☐
7. Spleen	☐	☐	☐
8. Kidney	☐	☐	☐
9. Thyroid	☐	☐	☐
10. Other (specify) _____	☐	☐	☐
c. Physiologic Studies			
1. None performed	☐	☐	☐
2. EEG	☐	☐	☐
3. ECG	☐	☐	☐
4. EMG	☐	☐	☐
5. Pulmonary function	☐	☐	☐
6. Other (specify) _____	☐	☐	☐
d. Other studies			

SECTION IV - TREATMENT SUMMARY

Record initial treatment only in this section. Subsequent treatment given for recurrence or metastases should be recorded in Follow-through Report.

38. Was treatment recommended for this patient?

- | | | | |
|--------------------------|---------------------|--------------------------|--------------------------------|
| ☐ | 1. Yes | ☐ | 4. No, other disease/condition |
| ☐ | 2. No, advanced age | ☐ | 5. No, diagnosed at autopsy |
| ☐ | 3. No, too young | ☐ | 6. Unknown |
| 7. Other _____ | | | |

39. Did patient refuse recommended treatment?

- | | | | |
|--------------------------|---------------------------------|--------------------------|------------------------|
| ☐ | 1. No treatment recommended | ☐ | 7. Yes, religion |
| ☐ | 2. No | ☐ | 8. Yes, transportation |
| ☐ | 3. Yes, ignorance | ☐ | 9. Yes, other _____ |
| ☐ | 4. Yes, language communications | ☐ | 10. Unknown |
| ☐ | 5. Yes, absence of symptoms | | |
| ☐ | 6. Yes, cost | | |

40. Non-definitive treatment prior to definitive treatment

- | | |
|--------------------------|------------------------------------|
| ☐ | 1. No |
| ☐ | 2. Yes (describe) |
| ☐ | a. Pain-relieving procedures _____ |
| ☐ | b. Blood transfusions only _____ |
| ☐ | c. Bypass surgery _____ |
| ☐ | d. Other _____ |

41. Summary: Definitive and Subsequent Treatments Received During Admission(s) for First Planned Course of Definitive Treatment.

- | | | |
|----------------------------|--------------------------|--------------|
| a. Definitive Treatment(s) | 1. No treatment | 6. Endocrine |
| ☐ | 2. Surgery | 7. Other |
| b. Subsequent Treatment(s) | 3. Irradiation: Beam | 8. Unknown |
| ☐ | 4. Irradiation: Isotopes | |
| | 5. Chemotherapy | |

42. Surgical Procedure (first definitive treatment)

- | | | | |
|--------------------------|---|--------------------------|---|
| ☐ | a. Was surgery planned for this patient? | ☐ | b. Tumor status after surgery |
| ☐ | 1. No surgery planned (omit other items, this page) | ☐ | 1. As reported on Operative Record |
| ☐ | 2. Surgery planned, not performed. Reasons: | ☐ | a. All gross tumor removed |
| ☐ | a. Patient refused | ☐ | b. Gross primary tumor left behind |
| ☐ | b. Condition deteriorated | ☐ | c. Involved lymph nodes left behind |
| ☐ | c. Other (specify) _____ | ☐ | d. Distant metastasis left behind |
| ☐ | 3. Surgery performed | ☐ | e. Other |
| ☐ | a. Report available | ☐ | f. Unknown |
| ☐ | b. Report not available | ☐ | 2. As reported on Post-operative Pathology Report |
| ☐ | 4. Intent of performed surgery | ☐ | a. Specimen margins free of tumor |
| ☐ | a. Pre-irradiation | ☐ | b. Specimen margins not free of tumor |
| ☐ | b. Post-irradiation | ☐ | c. Other |
| ☐ | c. Castration | ☐ | d. Unknown |
| ☐ | d. Ablation of other gland | | |
| ☐ | e. Other (Specify) _____ | | |
| ☐ | 5. Unknown | | |

c. Procedures performed:

1. Name of Procedure(s) & date of operation(s). Report also any statement of "why" procedures performed.

 _____ ☐ Unknown

2. Name of organs, tissues, and nodes removed

 _____ ☐ Unknown

SECTION IV - TREATMENT SUMMARY (Continued)

43. Detailed Summary of Radiotherapy-External Beam (Teletherapy)

a. Area (region) irradiated _____ Start Date _____ No. of Sessions _____ Completion Date _____ Dose rate: at tumor _____ r in air _____ r		b. Area (region) irradiated _____ Start Date _____ No. of Sessions _____ Completion Date _____ Dose rate: at tumor _____ r in air _____ r	
(1) Was therapy planned	Other _____	(1) Was therapy planned	Other _____
(2) Intent of treatment	"	(2) Intent of treatment	"
(3) Treatment directed to	"	(3) Treatment directed to	"
(4) Type of machine	"	(4) Type of machine	"
(5) Field modifiers	"	(5) Field modifiers	"
(6) No. of ports (fields)	"	(6) No. of ports (fields)	"
(7) Type of course	"	(7) Type of course	"
(8) Reason split/incomp.	"	(8) Reason split/incomp.	"
(9) Modifiers	"	(9) Modifiers	"
(10) Tumor status	"	(10) Tumor status	"
(11) Normal tissue reaction	"	(11) Normal tissue reaction	"

c. Area (region) irradiated _____ Start Date _____ No. of Sessions _____ Completion Date _____ Dose rate: at tumor _____ r in air _____ r		d. Area (region) irradiated _____ Start Date _____ No. of Sessions _____ Completion Date _____ Dose rate: at tumor _____ r in air _____ r	
(1) Was therapy planned	Other _____	(1) Was therapy planned	Other _____
(2) Intent of treatment	"	(2) Intent of treatment	"
(3) Treatment directed to	"	(3) Treatment directed to	"
(4) Type of machine	"	(4) Type of machine	"
(5) Field modifiers	"	(5) Field modifiers	"
(6) No. of ports (fields)	"	(6) No. of ports (fields)	"
(7) Type of course	"	(7) Type of course	"
(8) Reason split/incomp.	"	(8) Reason split/incomp.	"
(9) Modifiers	"	(9) Modifiers	"
(10) Tumor status	"	(10) Tumor status	"
(11) Normal tissue reaction	"	(11) Normal tissue reaction	"

(1) Was beam therapy planned? 1. No therapy planned 2. Planned, not given 2a Patient refused 2b Condition deteriorated 2c Other _____ 3. Therapy given 3a Report available 3b Report unavailable 4. Unknown	(2) Intent of Treatment 1. Prophylactic 2. Pre-operative 3. Post-operative 4. Castration 5. Suppression of gland function 6. Other (specify) _____ 7. Unknown	(3) Treatment directed to 1. Primary lesion 2. Adjacent tissues 3. Regional nodes 4. Metastatic site 5. Other (specify) _____ 6. Unknown	(4) Type of machine 1. Isotopie 2. Transformer 3. Linear Accelerator 4. Betatron 5. Cyclotron 6. Other _____ 7. Unknown Name _____
(5) Field Modifiers 1. Wedge filter 2. Compensating filter 3. Bolus 4. Other _____ 5. Unknown 6. None	(6) Number of ports (fields) 1. One 2. Two 3. Three 4. Four or more 5. Unknown	(8) Reason for Split/Incomplete 1. Does not apply 2. Local reaction 3. Planned 4. General condition 5. Psychiatric problem 6. Special problem 7. Progression of tumor 8. Other (specify) _____ 9. Unknown	(9) Modifiers 1. None 2. Hyperbaric oxygen, 3atm 3. Chemotherapeutic sensitizer 4. Chemotherapy, other 5. Radioprotective compound 6. Anoxic tourniquet 7. Oxygen, 1 atm 8. Other (specify) _____ 9. Unknown
(10) Tumor Status: 1. Not accessible 2. No change 3. Partial regression 4. Total regression 5. Grew under treatment 6. Unknown		(11) Normal tissue reaction 1. Pt. expired during treatment 2. No subjective or objective complaints Yes No Unk 3. Local effects _____ 4. Systemic effects _____ 5. Unknown _____	

SECTION IV—TREATMENT SUMMARY (Continued)

44. Detailed Summary of Radiotherapy—Sealed Source and Systemic Therapy

A₁ Sealed Source Therapy Location of Lesion treated _____ (1) _____ Was therapy planned Other _____ (2) _____ Intent of treatment Other _____ (3) _____ Type of GYN applicator Other _____ (4) _____ Permanency of source Other _____ (5) _____ Method of application Other _____ (6) _____ Tumor status Other _____ (7) _____ Sealed sources Other _____ (8) _____ Treatment directed to Other _____		A₂ Treatment Details (if unknown, record Unk) <table border="1"> <thead> <tr> <th>Application No.</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>(1) Treatment date</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2) No. of sources</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(3) No. of milligrams or millicuries</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(4) No. of hours applied</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(5) No. of milligram hours</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Calculated total dose</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(6) Maximum (Pt. A), in rads</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(7) Maximum (Pt. B), in rads</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>			Application No.	1	2	3	(1) Treatment date	_____	_____	_____	(2) No. of sources	_____	_____	_____	(3) No. of milligrams or millicuries	_____	_____	_____	(4) No. of hours applied	_____	_____	_____	(5) No. of milligram hours	_____	_____	_____	Calculated total dose	_____	_____	_____	(6) Maximum (Pt. A), in rads	_____	_____	_____	(7) Maximum (Pt. B), in rads	_____	_____	_____
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(7) Maximum (Pt. B), in rads	_____	_____	_____																																					
B₁ Sealed Source Therapy Location of Lesion treated _____ (1) _____ Was therapy planned Other _____ (2) _____ Intent of treatment Other _____ (3) _____ Type of GYN applicator Other _____ (4) _____ Permanency of source Other _____ (5) _____ Method of application Other _____ (6) _____ Tumor status Other _____ (7) _____ Sealed sources Other _____ (8) _____ Treatment directed to Other _____		B₂ Treatment Details (if unknown, record Unk) <table border="1"> <thead> <tr> <th>Application No.</th> <th>1</th> <th>2</th> <th>3</th> </tr> </thead> <tbody> <tr> <td>(1) Treatment date</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2) No. of sources</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(3) No. of milligrams or millicuries</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(4) No. of hours applied</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(5) No. of milligram hours</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>Calculated total dose</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(6) Maximum (Pt. A), in rads</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(7) Maximum (Pt. B), in rads</td> <td>_____</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>			Application No.	1	2	3	(1) Treatment date	_____	_____	_____	(2) No. of sources	_____	_____	_____	(3) No. of milligrams or millicuries	_____	_____	_____	(4) No. of hours applied	_____	_____	_____	(5) No. of milligram hours	_____	_____	_____	Calculated total dose	_____	_____	_____	(6) Maximum (Pt. A), in rads	_____	_____	_____	(7) Maximum (Pt. B), in rads	_____	_____	_____
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(4) No. of hours applied	_____	_____	_____																																					
(5) No. of milligram hours	_____	_____	_____																																					
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(6) Maximum (Pt. A), in rads	_____	_____	_____																																					
(7) Maximum (Pt. B), in rads	_____	_____	_____																																					
C₁ Systemic Isotope Therapy (1) _____ Was therapy planned Other _____ (2) _____ Intent of treatment Other _____ (6) _____ Tumor status Other _____ (9) _____ Isotope Other _____ (10) _____ Method of application Other _____		C₂ Treatment Details (if unknown, record Unk) <table border="1"> <thead> <tr> <th>Treatment No.</th> <th>1</th> <th>2</th> </tr> </thead> <tbody> <tr> <td>(1) Treatment date</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(2) Volume injected (ingested)</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(3) Number millicuries</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>(4) Calculated maximum tumor dose in rads</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table>			Treatment No.	1	2	(1) Treatment date	_____	_____	(2) Volume injected (ingested)	_____	_____	(3) Number millicuries	_____	_____	(4) Calculated maximum tumor dose in rads	_____	_____																					
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(3) Number millicuries	_____	_____																																						
(4) Calculated maximum tumor dose in rads	_____	_____																																						
(1) Was isotope therapy planned? 1. No therapy planned 2. Therapy planned, not given 2a. Patient refused 2b. Condition deteriorated 2c. Other _____ 3. Therapy given 3a. Report available 3b. Report unavailable 4. Unknown		(2) Intent of Treatment 1. Prophylactic 2. Pre-operative 3. Post-operative 4. Suppression of gland function 5. Other _____ 6. Unknown																																						
(3) Type of GYN applicator 1. None 2. Manchester 3. Fletcher 4. Heyman 5. Horwitz 6. Other _____ 7. Unknown		(4) Source Permanency 1. Permanent 2. Removable 3. Other _____ 4. Unknown																																						
(5) Application Method (sealed source) 1. Direct interstitial 2. After-loaded, interstitial 3. Intracavitary direct 4. Intracavitary afterloaded 5. Mold 6. Extracorporeal 7. Other (specify) _____ 8. Unknown		(6) Tumor status 1. Not applicable 2. Not accessible 3. No change 4. Partial regression 5. Total regression 6. Grew under treatment 7. Unknown																																						
(7) Sealed Sources 1. Gold 2. Radium 3. Radon 4. Iridium 5. Cesium 6. Cobalt 7. Tantalum 8. Strontium 9. Californium 10. Other _____ 11. Unknown		(8) Treatment directed to 1. Primary lesion 2. Adjacent tissues 3. Regional nodes 4. Distant metastasis systemic disease 5. Other _____ 6. Unknown																																						
(9) Isotopes 1. P ³² 2. I ¹³¹ 3. Au ¹⁹⁸ 4. Co ⁶⁰ 5. Other _____ 6. Unknown		(10) Method of Application (Isotopes) 1. Intracavitary 2. Interstitial 3. Intravenous 4. Oral 5. Intra-arterial 6. Intramuscular 7. Other _____ 8. Unknown																																						

SECTION IV-TREATMENT SUMMARY (Continued)

45. Detailed Summary of Chemotherapy and or Endocrine Therapy

a. Type of Therapy

Date therapy started _____ Date therapy completed: according to chart information _____

or

according to abstracting rules. _____

1. _____ Was therapy planned? Other _____
2. _____ Agents used, first course. Other _____
3. _____ Type of administration. Other _____
4. _____ Status of treatment, end of first course. Other _____
5. _____ Drug toxicity. Other (describe) _____
6. _____ Treatment effectiveness (at end of 1st course). Other _____
7. _____ Functional status of patient, beginning of therapy. Other _____
8. _____ Functional status of patient, end of first course. Other _____

b. Type of Therapy

Date therapy started _____ Date therapy completed: according to chart information _____

or

according to abstracting rules. _____

1. _____ Was therapy planned? Other _____
2. _____ Agents used, first course. Other _____
3. _____ Type of administration. Other _____
4. _____ Status of treatment, end of first course. Other _____
5. _____ Drug toxicity. Other (describe) _____
6. _____ Treatment effectiveness (at end of 1st course). Other _____
7. _____ Functional status of patient, beginning of therapy. Other _____
8. _____ Functional status of patient, end of first course. Other _____

(1) Was therapy planned? 1. No therapy planned 2. Therapy planned, not given 2a. Patient refused 2b. Condition deteriorated 2c. Other _____ 3. Therapy given 3a. Report available 3b. Report not available 4. Unknown	(4) Status of treatment, end of first course 1. Completed 2. To be continued on a maintenance basis 3. Unknown	(7) Functional status of patient at beginning of first course 1. Normal activity 1a. asymptomatic 1b. symptomatic 2. Unable to work 2a. capable of self care 2b. not capable of self care 3. Severely disabled 3a. not terminal 3b. terminal 4. Other (describe) _____ 5. Unknown	(8) Functional status of patient at end of first course of treatment 1. Normal activity 1a. asymptomatic 1b. symptomatic 2. Unable to work 2a. capable of self care 2b. not capable of self care 3. Severely disabled 3a. not terminal 3b. terminal 4. Other (describe) _____ 5. Unknown																																	
(2) Agents used, this treatment 1. Chemicals 2. Hormones 3. Steroids 4. Antibiotics 5. Other _____ 6. Unknown	(5) Drug toxicity 1. None 2. Some (describe) _____ 3. Unknown	List of Agents Used With Start and Termination Dates <table border="1"> <thead> <tr> <th>Name of Agent</th> <th>Start Date</th> <th>End Date</th> </tr> </thead> <tbody> <tr><td>1. _____</td><td>_____</td><td>_____</td></tr> <tr><td>2. _____</td><td>_____</td><td>_____</td></tr> <tr><td>3. _____</td><td>_____</td><td>_____</td></tr> <tr><td>4. _____</td><td>_____</td><td>_____</td></tr> <tr><td>5. _____</td><td>_____</td><td>_____</td></tr> <tr><td>6. _____</td><td>_____</td><td>_____</td></tr> <tr><td>7. _____</td><td>_____</td><td>_____</td></tr> <tr><td>8. _____</td><td>_____</td><td>_____</td></tr> <tr><td>9. _____</td><td>_____</td><td>_____</td></tr> <tr><td>10. _____</td><td>_____</td><td>_____</td></tr> </tbody> </table>		Name of Agent	Start Date	End Date	1. _____	_____	_____	2. _____	_____	_____	3. _____	_____	_____	4. _____	_____	_____	5. _____	_____	_____	6. _____	_____	_____	7. _____	_____	_____	8. _____	_____	_____	9. _____	_____	_____	10. _____	_____	_____
Name of Agent	Start Date	End Date																																		
1. _____	_____	_____																																		
2. _____	_____	_____																																		
3. _____	_____	_____																																		
4. _____	_____	_____																																		
5. _____	_____	_____																																		
6. _____	_____	_____																																		
7. _____	_____	_____																																		
8. _____	_____	_____																																		
9. _____	_____	_____																																		
10. _____	_____	_____																																		
(3) Type of administration 1. One agent only 2. Two agents 2a. simultaneously 2b. consecutively 3. Three or more agents 3a. simultaneously 3b. consecutively 4. Three or more both simultaneously and consecutively 5. Other _____ 6. Unknown	(6) Treatment effectiveness, end of first course 1. Not effective 2. Partially effective 3. Patient in remission 4. Relapse occurred during treatment 5. Relapse occurred after discontinuation of drug(s) 6. Unknown																																			

PATIENT FOLLOW-THROUGH INFORMATION

46. Other (Miscellaneous) Cancer-directed therapy
Describe: include dates and judged effectiveness of treatment

47. Subsequent Treatment. Using the categories below briefly describe any subsequent treatment received by patient. Note whether patient treated this or another institution; as an in- or out-patient.

1. Not applicable
2. No subsequent treatment
3. Surgery: record date(s), operative procedures, tissues/parts removed, surgeons impression of tumor
4. Radiation, Beam Therapy: record start & completion dates, area irradiated, no. of sessions, dose rate at tumor
5. Radiation, Sealed Source or Systemic Isotope: record dates, lesion location, dosage rate, no. of sessions
6. Chemotherapy: record dates, agents used, no. of courses, judged effectiveness of treatment
7. Endocrine Therapy: record dates, agents used, no. of courses, judged effectiveness of treatment
8. Other Definitive Treatment: record dates and describe treatment
9. Supportive Treatment only: record dates and describe briefly

- A. First course of subsequent treatment. _____

- B. Second course of subsequent treatment. _____

- C. Third course of subsequent treatment. _____

- D. Fourth course of subsequent treatment. _____

- E. Fifth course of subsequent treatment. _____

48. Death Information

Date of Death	Survival Time Yrs. Mos.	Cancer Status
Place of Death: This Hospital ☐ Other ☐ _____ Name, Town & State		
Autopsy: ☐ Not performed ☐ Unknown if performed ☐ Performed but not available ☐ Performed and available		
Autopsy No.	Findings	

Cause of Death	Specified as	ISC Edition No.	Volume	Certificate
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Information Recording Categories	1	2	3	4	5	6	7	8	9
I. Date this report									
II. Current Quality of Survival									
III. Reason(s) for current Quality of Survival									
IV. Present status, this cancer									
V. Techniques used to diagnose present status this cancer									
VI. Evidence of new neoplasm(s)									
VII. Change/confirmation of diagnosis									
VIII. Technique(s) used to change/confirm diagnosis									
IX. Treatment complications, 1st planned treatment									
X. Subsequent treatment since last follow-through									
XI. Source(s) of follow-through information									
XII. Success, most recent follow-through									
XIII. Current responsibility for patient follow-through									

INFORMATION RECORDING CATEGORIES AND ALTERNATIVES

(For certain categories it may be appropriate to select more than one alternative)

I. Date of this report II. Current Quality of Survival 1. Deceased. Complete Item 48 of abstract 2. Capable of normal activity—asymptomatic 3. Capable of normal activity—symptomatic 4. Unable to work—capable of self care 5. Severely disabled—not terminal 6. Severely disabled—terminal 7. Unknown III. Reason(s) for current Quality of Survival 1. Not applicable 2. No disability 3. Due to presence of cancer 4. Due to causes other than cancer 5. Due to cancer and other causes 6. Unknown 7. Other IV. Present status, this cancer 1. Not applicable 2. No evidence, this tumor 3. Tumor continued at primary site 4. Tumor continued at primary site & extended 5. Tumor continued at primary site & metastasized 6. Tumor recurred at primary site 7. Tumor recurred at a secondary site 8. Other 9. Unknown V. Technique(s) used to diagnose present status this cancer 1. Not applicable 2. Microscopic 3. X-ray 4. Endoscopic 5. Clinical 6. Other 7. Unknown VI. Evidence of a new neoplasm(s) 1. Not applicable 2. Yes (record date of detection) 3. No 4. Unknown	VII. Change or confirmation of diagnosis 1. Not applicable 2. Diagnosis has not been changed 3. Diagnosis has been changed 4. Diagnosis had been confirmed VIII. Technique(s) used to change/confirm diagnosis 1. Not applicable 2. Histology 3. Cytology 4. Hematology 5. Bone Marrow Studies 6. X-ray 7. Clinical 8. Endoscopic 9. Slide review 10. Other 11. Unknown IX. Treatment complications related to first planned treatment 1. Not applicable 2. Yes (describe briefly) 3. No complications 4. Unknown 5. Other X. Subsequent treatment received since last follow-through 1. Not applicable 2. No treatment 3. Yes—surgery 4. Yes—beam therapy 5. Yes—radiotherapy 6. Yes—chemotherapy 7. Yes—endocrine therapy 8. Yes—other definitive therapy 9. Supportive treatment only 10. Unknown XI. Source(s) of follow-through information 1. Not applicable 2. Hospital readmission 3. Clinic visit 4. Doctor's office 5. Public Health nurse 6. Patient's relative(s) 7. Law enforcement agency 8. Another medical institution 9. Other 10. Unknown XII. Success of most recent follow-through attempt 1. Not applicable 2. Yes 3. No—Patient deceased 4. No—Doctor failed to reply 5. No—Patient failed to reply 6. No—All contacts with patient lost 7. Other (note briefly on Item 50) 8. Unknown XIII. Current responsibility for patient follow-through 1. Not applicable 2. This registry 3. Another registry 4. Patient deceased 5. Other
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50. Other Significant Medical and Follow-through Information

TUMOR REGISTRY ABSTRACT FORM (SUMMARY)

PATIENT IDENTIFICATION

NAME (Last) (First) (M.I.) (alias or maiden name)						CENTRAL REGISTRY NO.
ADDRESS (Street) (City) (County) (State) (Zip) (Phone)						LOCAL REGISTRY NO.
Census Tract	Sex ☐ Male ☐ Female	Number of Pregnancies	Number of Live Births	Race ☐ White ☐ Other-specify ☐ Negro	Marital Status ☐ Never Married ☐ Widowed ☐ Sep. ☐ Married ☐ Divorced ☐ Unk.	HOSPITAL CHART NO.
Social Security No.		Date of Birth		Blood Type Gp Rh	Date of Admission	Date of Discharge
Person Who May Be Contacted (Name) (Address) (Phone) (Relationship)						PATIENT CLASSIFICATION ☐ Inpatient ☐ Private ☐ Outpatient ☐ Staff

HISTORY

Was this cancer diagnosed elsewhere? ☐ Yes ☐ No ☐ Unk.	Was this cancer treated elsewhere? ☐ Yes ☐ No ☐ Unk.	Was patient hospitalized elsewhere for this cancer? ☐ Yes ☐ No ☐ Unk.	List places and dates, etc. under symptoms and medical history
Date First Sought Medical Care ☐ This hospital ☐ Other (specify)			
Date of Diagnosis ☐ This hospital ☐ Other (specify)			
Describe First Symptoms and Dates, this Cancer			
Pertinent Medical History (include other major diseases, cancer, and carcinogen exposure)			

DIAGNOSIS

Primary Site	Paired Organ
Histological Type	☐ No ☐ Yes (specify)
Other Primary Sites	
Basis of Initial Diagnosis ☐ Clinical ☐ Histology ☐ Cytology ☐ X-ray ☐ Autopsy ☐ Unknown ☐ Other	
Was diagnosis confirmed by Histopathology Report ☐ Yes ☐ No	
Extent of Disease (Stage)	
☐ 1. Carcinoma in situ (must be on path. report) ☐ 2. Localized to primary site ☐ 3. Regional: direct extension, no node involvement ☐ 4. Regional: direct extension, regional node involvement ☐ 5. Regional: no extension, regional node involvement	☐ 6. Regional: not otherwise specified ☐ 7. Not localized, unknown if regional or remote ☐ 8. Remote or disseminated ☐ 9. Unknown
Diagnostic Methods (Include all methods used in making final diagnosis)	
☐ 1. Histopathology (NOS) a. Primary site tissue b. Metastatic site tissue c. Autopsy tissue ☐ 2. Cytopathology ☐ 3. Hematology ☐ 4. X-ray studies	☐ 5. Radioisotope studies: diagnostic nuclear med. ☐ 6. Clinical Observation (NOS) a. Endoscopic studies b. Palpation/ext. observation c. Gross surgical specimen d. Exploratory surgery e. Autopsy ☐ 7. Hormonal or Enzymatic studies ☐ 8. Unknown ☐ 9. Other

TREATMENT

TREATMENT First Course at Hospital (Specify date and describe)
 Purpose* Type
☐ Surgery
☐ Beam Radiation
☐ Other Radiation
☐ Chemotherapy
☐ Hormonal Therapy
☐ Endocrine Surgery
☐ Endocrine Radiation
☐ Other Cancer Therapy - specify
☐ No Treatment - Reason
 *Purpose -- 1. Diagnosis only 3. Supportive 5. Unknown
 2. Curative 4. Palliative

SUBSEQUENT TREATMENT (Specify date, type, purpose and describe briefly)

STATUS AND FOLLOW-UP

Vital Status ☐ Alive ☐ Unknown ☐ Dead		Evidence of Cancer (at last contact) ☐ Yes ☐ Unknown ☐ No	Date of Last Contact: _____ Month/Day/Year
Quality of Survival (answer if alive) ☐ Alive, but activity level unknown If Activity Level is Known: Capable of Usual Activities ☐ Fully Capable ☐ Limited Capability ☐ Capable, extent unknown		Incapable of Usual Activities ☐ Needs no Nursing Care ☐ Sometimes Needs Care ☐ Needs Full-Time Care ☐ Care Needs Unknown	If Incapable: Reason ☐ Not Applicable ☐ Cancer ☐ Other Causes ☐ Cancer and other Causes ☐ Reason Unknown
Follow-up Physician and Address			
Other Physician and Address			
Other Physician and Address			
Name of Person Submitting Report		Date	

DEATH INFORMATION

Date of Death	Survival Time Yes Mos.	Cancer Status
Place of Death ☐ This Hosp. ☐ Other	Name of Place of Death	
		State and County
Autopsy: ☐ Not performed ☐ Unknown if Performed ☐ Performed but not Available ☐ Performed and Available		
Autopsy No.	Findings	
Cause of Death	Specified As	ISC Edition No. Volume Certificate